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ORIGINAL COMMUNICATIONS.

ADDRESS OF JOSEPH GRAHAM, M.D., THE RETIRING PRESIDENT.

(Delivered before the Medical Society of North Carolina, at New
Bern, N. C., May 20, 1886.)

Gentlemen of the Medical Society of the State of North Carolina:

To-day we chronicle another year in the life of this Society. Having doffed for the nonce your professional harness, and ceased awhile your ministrations to the sick and suffering, you have come together from all sections of the Old North State, hoping to enjoy (to many of you) the only respite from labor which you experience during the year. And in this spirit I am happy to greet you here to-day, and express the wish that this meeting shall be to one and all, not only a source of much pleasure, but of genuine profit also.

The annual assembling of so many toilers in a common vineyard can but be productive of ties of friendship and much social enjoyment. On these delightful occasions it is our privilege to grasp hands, look into the faces and speak the words of friendship to many responsive hearts whom we can meet but once a year.

The value of such felicitous social intercourse and the being brought face to face with the inner-man medical, should not be too lightly estimated. It raises our appreciation of our adopted profession, creates an *esprit du corps*, and imbues plenteously our hearts with brotherly love for our comrades who are warring so nobly against misery and death.

Having alluded thus briefly to the social advantages of these meetings, we come now to speak of the value of *organization*, and the *duty* which each individual member owes to this Society.

In the accomplishment of marked success in any particular line or calling in life, we must necessarily look to the *associated action* of its followers. That high order of genius which rises above all obstacles, and, single-handed, is able to triumph, falls to the lot of exceedingly few. Hence we cannot afford to rely upon our independent and individual efforts, but must associate ourselves with those whose study and practice conform to our own.

In medicine, not only in the advancement of the individual physician measurably dependent upon association, but the science itself must wane without its aid. And the condition of the Medical Society of any State points unerringly to the character and status which the profession enjoys in its commonwealth.

The State Medical Society is an organization the usefulness of which is in direct proportion to the interest manifested in it by the rank and file of the profession. Hence a great duty rests upon us all, lest by indifference and neglect we allow it to fail of that high ideal of utility which every member should set before himself. The first step in the path of duty is punctuality in attendance upon its conventions. But few excuses should be counted sufficient to warrant a member's absence. He can but be benefited by contact with his brother practitioners of the State, if he but erect for himself a high standard of professional usefulness, and scorn any motive lower than the highest in any work he may find to do. It must be said to their credit that, if you desire to find the hard-worked men of the profession, the busiest practitioners, the most successful physicians and surgeons, and those who enjoy the greatest confidence of their several communities, you must go to their conventions. At the post of duty are ever to be found the leaders, as well as the earnest seekers after knowledge. Show me the man who is always too busy to attend the meetings of his Society, and I

will point out to you, with very rare exceptions, one (granting the honesty of his excuse) who is very slipshod in the prosecution of his work. Let such an one be not deceived. He is growing blind to his own interests, just in proportion as indifference to professional obligations takes possession of him.

Lord Bacon has well said : "I hold *every man* a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amend, to be a help and an ornament thereunto."

This is a day of progress, and the spirit of advancement is abroad in the land, not only outside, but within the medical profession as well, and he who keeps himself abreast of the foremost will always be the man of success, verifying the adage that "Everyone is son of his own works."

The high standing which this Society has thus far attained, of course, should be a cause of congratulation among ourselves. But one must not rest content here : our watchword must be "Onward ! upward ! till the goal we win !"

The success which we have achieved in the past must be but the incentive which shall goad us on to higher plains and nobler deeds—to greater excellence in performance of duty, and more exalted ideas of the influence which a thoroughly united medical profession can and must wield upon the body politic. We see this influence, but dawning, as it were, in the recent enactments of our State Legislature (very meagre, it is true), in behalf of our State Boards of Medical Examiners and of Health. And this much is the fruit of the organized efforts of a very *few*, more zealous than the majority. We hail it, therefore, as a faint foreshadowing of the great results which are in store for us when we shall have become a truly united profession, alive to our own interests and ever mindful of those of the public. But as the *individual* never rises higher than he aspires, so also will the usefulness and influence of the *profession* be regulated and gauged by that standard which its body corporate set up for it.

Then let us cast about and consult among ourselves as to the methods best calculated to insure that standing and weight among our fellow-citizens which our offices as conservators of their health and well being so justly entitle us. How much soever we may differ as to the *modus operandi*, I am satisfied all will be agreed

upon the strength of union. We must enlist under one banner every physician in the State who is eligible to membership in this Society. We must bring into its fold or under its control every physician, as far as we can, "who was practising in the State prior to April 15th, 1859—all those licensed since that date by the State Board of Medical Examiners, and any who have diplomas from regular medical colleges prior to January 1st, 1880." I would suggest to you, then, the propriety of taking some immediate and decisive steps for enlarging the influence and usefulness of our organization. And looking to that end, it would be well for this Society at its present meeting to adopt some system which will insure the revival of county societies wherever they have heretofore existed, and the establishment of one in every county where there has been none, until these auxiliary links shall form a chain of professional brotherhood reaching from the mountains to the seaboard, and embracing every reputable practitioner in the State. Paramount to all other objects must ever stand the *most efficient possible organization* of the medical profession of the State, for upon it depends our every success, whether scientific, literary or legislative. To accomplish this it would be well that our Constitution be remodelled, so that the State Society shall have power to charter and control all these county and local societies in the State and to make rules and regulations for their guidance in so far as pertains to the welfare and honor of the general profession—not, however, interfering with matters of self-government and of purely local interest. In this way only can this Society even exert its proper influence on the profession, both individually and collectively in the promotion of a high standard medical education, the fostering of high-toned ethics and a generous rivalry in the elevation of provisional character and interests. Thus we will be enabled to mould public sentiment and procure wholesome legislative enactments for the preservation of our own lawful privileges and the protection of the people themselves against the wiles of ignorant pretenders and impudent charlatans. The advancement of scientific research may be thus furthered, also, by systematic reports on climatology and the etiology of disease in the various sections of the State, together with its medical botany and the therapeutics of the same. Such a thorough organization as is here contemplated, I am aware, will be difficult, and can only be accomplished after the surmounting of many

obstacles and at the cost of much time and some money. But how does it differ here from any other enterprise of value? Great prizes are estimated by their cost, and are the reward of well-directed, persistent effort, tempered with judgment and fired with that zeal which always insures success.

Possessed of an intelligence which cannot fail to appreciate the magnitude of its importance, this body of medical men must see at a glance that thorough organization is the keystone to success. Without it we can accomplish but little, with it all things are possible to us, and our usefulness and progress will be measured by its approach to perfection.

The vast area of our territory, extending over nearly one hundred counties, very many of which are as yet difficult of access on account of lack of railroad communication, will hinder much our progress for a time. But the rapid march of internal improvement will soon furnish sufficient travelling facilities, and our difficulties will melt away before resolute purpose and self-sacrificing devotion to duty, like snow before the genial rays of the noon-day sun. I have an abiding faith that, once enlisted, and with a full concert of action among themselves that the medical profession of this State can and will compass this great work, and thus lay the foundation for a measure of usefulness far surpassing the brightest dream of the most sanguine.

With the profession in each county organized under a charter granted from this central legislative power, and working in concert with and under its guidance as the law-giver, wise and prudent counsels will prevail, selfish ambitions be laid aside, and all the power of concerted action will be felt in the advancement in honor, dignity and influence. With this central controlling body, with its numerous branches permeating every township and hamlet in the State, the greatest possible facilities for redressing wrongs, protecting our own rights and presenting work of all kinds will have been afforded. The unselfishness of our purposes and the self-sacrificing devotion to duty, which I am proud to say have ever characterized the profession in all ages and in all lands, will become thoroughly manifest, and must necessarily address itself favorably to the honest, sober judgment of our fellow-citizens. They will be convinced that we seek no legislative enactments for our own exclusive benefit ; but that, true to the high calling to which we have been called, we

seek first the welfare of the community at large, hoping to be rewarded only as they are benefited. But this ideal organization can only be obtained through county societies. And these county societies should be clothed with all necessary power for the exercise of immediate jurisdiction over the medical profession and have a special care of all medical interests in the several counties. Each one should form one of the component parts of this Society and be entitled to equal representation in this medical legislature, from which all laws pertaining to the governmental control of the profession in the State shall emanate.

We would not appear to have lost sight of the cultivation of the science and the art of medicine. Not at all. We are only preparing for a more vigorous and systematic prosecution of such investigations. We desire to organize and drill our forces for the work before us—to make their minds familiar with the obligations and responsibilities resting upon them, in order that they may see clearly the path of duty, and pursue it with a steadfast purpose, which shall teach them to be true to themselves and have a care for the welfare of the whole profession. To this end I recommend for your consideration the appointment of a committee whose duty it shall be to examine the Charter, Constitution and By-Laws of this Society and see what changes, if any, are needed to advance the medical interests of the State to the highest point of usefulness and perfection, and to report their conclusions to this or the next annual Convention.

For about one-third of a century has the State Medical Society been striving for the prosperity and general welfare of the profession, and, it has been truly said, with a fair measure of success, having accomplished much in which we may take just pride. But we should be alert for every improvement, and it might be well for us to examine from time to time the constitutions and rules of action of similar societies in some of the foremost of our sister States, as well as their State laws pertaining to the medical profession and medical interest therein. Notwithstanding the *New York Medical Record*, in a recent editorial, has been pleased to style North Carolina the "banner State in respect to the legal safeguards thrown about medical practice," we should "not sleep upon our laurels," for if we do we will awake in the not distant future to find some of our younger, but progressive sisters outstripping us,

After some correspondence and a limited examination of some of their plans of operation, I am convinced that the great draw-back to medical progress in this State is the want of consolidation into one harmonious whole. Of about fourteen hundred practitioners in the State this Society cannot boast even an acquaintance with more than about one-third of the number, while in the State of Alabama (and I mention her in the spirit *palman què meruit ferat*) the profession in nearly every county has been enlisted into one army of workers, who have accomplished more in the same time than those of at least any other Southern, and I had almost said Northern State also. But this great work has required for its accomplishment much self-sacrificing and earnest labor and a considerable expenditure of money by their Medical Association. In about twelve years, I think, they have expended about forty thousand dollars, in addition to a vast amount of persistent, united, well-directed individual and general effort. But, in regard to the large sum of money, it must be noted that, in that State, the Medical Association, besides its immediate professional interests, is the Board of Medical Examiners as well as the Board of Health also, and much of this money has doubtless been expended in furtherance of the work of the latter. Be that as it may, in annual installments it was but a light tax upon the profession in that length of time. I am satisfied that we can do as much as they if we once get our long list of scattered physicians enrolled in a well-disciplined body, with duty as our watch-word and success our shibboleth.

The talent and spirit of self-sacrifice is but dormant in our ranks, awaiting only the call to action and a full understanding of what is sought to be accomplished.

After *organization*, perhaps the next most interesting consideration to which I could beg your attention would be, how to make our sessions most entertaining and profitable.

It is always pleasant, and attended with more or less profit, to listen to reports of well-selected and carefully recorded clinical cases; but in addition to such volunteer material, I think there should be one day set apart for the discussion of subjects which, having been selected prior to the meetings, should be sent out to gentlemen who will prepare to discuss them. To accomplish this I would recommend that the President be empowered to select a

conductor of debate, whose duty it shall be to select a subject or subjects for discussion, and shall open the debate on each with the privilege of the concluding speech.

In presenting his subject the conductor shall do so, not by reading a written essay upon it, but off-hand, in as concise a manner as possible, without other written help than perhaps a few short notes. He must present one subject at a time, and it shall be before the Society, till all who desire shall have spoken to it, when he may, if he chooses, conclude the discussion of it by making any reply or explanation he may deem necessary. One subject having been thus disposed of, he opens another to be debated in the manner just prescribed, and so on till he has completed his list. It should be the duty of the conductor to furnish the Secretary, three months prior to the meeting of the Society, a list of the subjects for discussion, in order that he may have them embodied in a printed circular. This circular should contain, also, as far as the Secretary can obtain it, a resumé of all the other papers and business likely to come before the approaching Convention. In this way members may become familiar with all the subjects likely to be discussed, and will come prepared to take an active part in the debate. This general debate is not intended to bring forth long *written* lectures on special diseases or medical questions either, but to enable the members for mutual instruction to set forth their views, in short, off-hand speeches, on current medical topics, by detailing personal experiences in the use of new remedies or any original observations in reference to the nature of disease and the therapeutics adapted thereto, or any facts or peculiarities of epidemic or endemic influences which they had noted, and to bring out the prominent features of professional experience and convictions in a concise and informal manner. And each member should, immediately after adjournment, and while fresh in his memory, reduce his remarks to writing and hand them to the Secretary in order that they may be incorporated in the transactions of the meeting. Let him also be particular to accompany them with such explanations as will enable the Secretary to properly and intelligently place them in the report of the debate. I would suggest, also, that they occupy only one side of the paper, to save transcribing for the printer. An arrangement more or less like the above, especially as regards members being made acquainted with the subjects for discussion prior to the assembling of the

Convention in order that a number of gentlemen may be prepared to give their views and experiences obtained in very many of the best medical societies, both North and South, and anyone who observed the great lack of debate in many of our meetings has been forced to the conclusion that the desired usefulness of these conventions has been very much crippled thereby. Being not much accustomed to public speaking, most physicians will be benefited by this allowance of time for preparation and arranging of their thoughts, in order that they may speak more fluently, without overlooking many matters of interest. It may, perhaps, have been the original purpose to have the annual essay as the subject for discussion; but however the intention may have been, it has failed in practice. It has become the custom for the essayist to select his own subject, and it has never been made known to the members till he announces it when he rises to present it. How much more profitable and better would it be to have several other gentlemen, having been made acquainted with the title of the paper a few weeks prior to the meeting, to discuss it, giving the Society the benefit of their own experiences and the details of certain procedures and remedies which had been crowned with success in their hands. But even this plan would be inferior, I conceive, to the one I suggested--of an unwritten statement of the subject and an off-hand discussion of the same, in speeches of five or ten minutes duration. The subjects for this general discussion should *preferably* be such as occur especially to the North Carolina practitioner, and should embrace any peculiar features brought out by climate, latitude or habits of the people, and any conditions not generally noted in the text-books. Thus we would lay the foundation for the study of disease as it occurs among ourselves, modified, perhaps, by our climate, and treated by remedies more or less influenced by locality and continued peculiarities of its people. In this way could be saved from oblivion much of the vast fund of useful clinical experience of the country practitioners, as we are all denominated by our metropolitan brethren.

It is certainly true that, above all, clinical facts are always valuable, especially since we have been thus far able to solve but few of the problems of medical science. And there is but one way by which we can preserve our work in such shape as to make it available to ourselves and really interesting to the profession for intelli-

gent, logical deductions, and that is by the accurate and careful keeping of systematic *case records*—recorded daily, and in many instances at the bedside, while the facts are under observation, and with the aid of all the modern appliances with which this age of progress has supplied the physician.

The completeness and portable shape in which the paraphernalia for accomplishing this work is offered to the profession, including, as it does, the clinical thermometer, urinary test-case and blank record sheets, has reduced the labor almost to the minimum—a matter of no small moment to the busy practitioner. I fear that most of the older heads among us have gone too far in the grooves in which we started for us to throw off the shackles of habit and do our part in full as we should. But I suggest to our younger brethren, alike the pride and hope of the Society, that they begin at once to keep systematic case records of their daily work. They will find that it begets, among other advantages, more careful examinations, a greater precision in diagnosis, a more intelligent comprehension of the action of remedies, a clearer insight into the etiology of disease, as well as its symptomatology, its modes of attack and its tendencies towards death or recovery. But few of us are favorably situated for original scientific work, but everyone has a duty before him in the preservation of valuable clinical facts. And just here I am reminded of another of our sins of omission, and one of which we are almost unanimously guilty, and that is a failure to do our part towards supplying material for our own NORTH CAROLINA MEDICAL JOURNAL. The most of this can very properly be charged to the ill habit of not keeping accurate notes of our experiences. If every physician present, seeing that

“Ill habits gather by unseen degrees,
As brooks make rivers, rivers run to seas.”

would resolve to shake off this lethargic indifference and begin immediately upon his return home to make daily records of all his cases, he would soon have an accumulation from which he could easily select something of interest and value to the readers of the JOURNAL. It is a shame upon the profession of the State that they have done so little, by their pens, at least, to help hold up the hands of its deserving editor, of whom it would be no fulsome laudation to say that he has done more for the advancement of medical science

and the elevation and prosperity of the profession of North Carolina than any physician who ever lived within its borders. When you have taken this first forward step, the day will not be far distant when the NORTH CAROLINA MEDICAL JOURNAL will begin to reflect credit upon the profession of the State, as it has ever done upon its editor. It is not for lack of ability that State talent has been so much more conspicuous by the absence than the presence of home articles in the JOURNAL, but on account of procrastinating indifference and careless habits of trusting to over-taxed memories, which fail us, for some of the most important and interesting points when we would put them in shape for print.

A regular and systematic habit of note-taking, then, would soon overcome that mistaken modesty and indisposition to attract attention, so characteristic of all North Carolinians. Fortified by accurate records of all the principal features of the case, you will feel emboldened to tell the truth. It is true that elegance of diction and ornate style may not at first characterize your productions ; but lack of these cannot mar the value of well-observed facts and sound principles which your well-measured experience has inculcated. Then let each one resolve to *do* and keep a record of it, since "We live in deeds, not years, in thoughts, not breaths."

At your last Convention a change in the By-Laws of the Society was effected relative to the Committee on Nominations by the adoption of the following resolution offered by Dr. R. H. Lewis, of Raleigh :

Resolved, That the members of the Nominating Committee be elected, one from each Congressional District, by the members present on the night of the second day, and in the absence of any member from any district, the vacancy shall be filled by the President.

At the present session, for the first time, you will be called upon to put the new law into practice. And I need hardly remind you that this is by far the most important committee of our organization, and great care should be exercised in the selection of its members ; for upon the wisdom and prudence with which they act will depend largely the welfare of the Society. With an eye single to this, they should be swayed in their choice by neither fear, favor nor affection, but should canvass thoroughly the fitness of every name presented for their consideration. This, of course, will be done in all fairness and good-will, and with malice toward none ;

but frankly and freely, in the full assurance that all the deliberations and discussions of this committee are strictly private and confidential. Its *conclusions* are alone admissible for report outside the doors of the committee-room, and that not till they have been published to the Society through its chairman. With its deliberations stripped of this confidential privacy, the Nominating Committee would be unable to arrive at conclusions which would redound to the best interests of the Society. The necessity for selecting officers from among the men who have been for the longest time *working members* of the Society, and consequently well imbued with the true purposes of the organization, cannot be too strongly inculcated.

The growing importance and influence of your Board of Medical Examiners is well attested by their report of their work for the year just closed. At their meeting during the last session of the Society, in Durham, there were present for examination the unprecedented class of one hundred and one. Of this number eighty-four received permanent and four temporary licenses, while one withdrew and twelve were rejected. In Raleigh, August 24th, sixteen candidates applied, thirteen passed satisfactorily and three were rejected. The Board then adjourned to Asheville, August 27th, for the greater convenience of the profession in the trans-montane section. There they met a class of thirty-seven, and of these, after careful examination, twenty-two were found worthy to be licensed, seven were allowed to withdraw and eight were rejected. From the above figures we find that the applicants during the year aggregated one hundred and fifty-four. Of this number one hundred and nineteen fulfilled the requirements of the law and received permanent licenses, while four were granted a temporary certificate (which the law says shall only hold good till the next regular meeting of the Board, when the candidate shall undergo another examination), making a total of one hundred and twenty-three who were wholly or partially successful, while the eight who withdrew must be added to the twenty-three rejections, making thirty-one found unfitted to receive the State's sanction to practice medicine. But, really, in passing upon this report, while all withdrawals, evidencing, as they did, undoubted deficiency, must be added to the rejections, swelling the number very properly to thirty-one, yet we can hardly in fairness add the four temporary to the one hundred and nineteen permanent licentiates. This being the case, we find that, in truth, one

hundred and fifty applied, of whom one hundred and nineteen were successful, while thirty-one were unsuccessful. In other words, the year's work shows that $79\frac{1}{2}$ per cent. received license, an $20\frac{1}{2}$ per cent. were rejected, or that not quite one in every five applicants were found duly qualified to enter upon the duties of the profession.

The law in regard to the qualifications of those who may go before the Board for examination for license to practice medicine in North Carolina is deficient in one very important particular, viz: in not requiring the applicant to produce his diploma of graduation from some recognized regular college before being examined. We should try and have this amended by the State Legislature as one of the steps towards a higher standard of professional excellence. From an experience on the Board immediately preceding this, and from conversations with its members, I know that a considerable number of "one-year men," and, indeed, one or two who had never attended any college at all, have been among those asking to be licensed. The licensing of such men, even though they may have acquired enough technical information on general branches to get the votes of a *majority* of the members of the Board, can but tend to lower the standing and influence which should be accorded the medical profession. Instead of a *majority* of the votes (independent of the importance of the claims they represent) entitling one to the license, the law should be so amended that it shall read "that less than five members concurring in the qualifications of the applicant, he is rejected." It is to be noted, also, that where a candidate succeeds in obtaining only *four* votes, the bare legal majority, that they are almost invariably upon the most unimportant branches, and he really ought to be rejected, and would be, but for this flaw in the legislative enactment. In this connection, it is gratifying to see that medical practice laws have received the sanction of the highest courts in several of our sister States, and that their validity and constitutionality have been affirmed in recent decisions on the subject; thus establishing the fact that boards not only have the power to grant, but for sufficient cause ("unprofessional conduct") to rescind licenses as well. A decision in an Illinois court, among other points, goes on to cite that "the board, in the exercise of its discretion, cannot be controlled by judicial tribunals. Unprofessional conduct and criminal conduct are not synonymous. The law makes the State Board of Examiners the judge of the former. Equity will not interfere to control its judgment."

Says the New York *Medical Record* of a recent date: "Twenty-nine States and Territories have passed laws to regulate medical practice, In five of these States, viz: Alabama, Arkansas, Mississippi, North Carolina and Virginia (all Southern States, it will be observed), diplomas are not sufficient to give a man a legal standing. He must meet the requirements of the State Board.

In respect to the legal safeguards thrown about medical practice, North Carolina seems to be the "banner State, and she seems to show her faith by her works."

Thus we see that the good work of the Medical Examining Board, begun here in 1859, goes bravely on, and is gradually spreading its beneficent influence to many other States.

It will be unnecessary for me to say anything to you concerning your Board of Health, as they will make a specific report at the joint meeting with the Society at its present session.

Several other subjects need the attention of the Society, but I cannot trespass upon your time longer, and my successors will doubtless call attention to them, as they may occur to each.

An address of this character, I know, can hardly be said to be complete without some allusion to the great importance of a higher medical education. But neither time nor space will admit of my going into this extensive subject again this year, after the able and extended remarks in the Message of my honorable predecessor.

And now, gentlemen, the Annual Message is before you, with its countless imperfections, of which none can be more conscious than I. But if it shall be in the least instrumental in advancing the usefulness of this Society or in elevating the profession in North Carolina, I shall have succeeded in my undertaking.

You have my thanks for your kind consideration, exhibited in your patient attention, and I must remind you, in conclusion, that

"Whoever thinks a faultless piece to see,
Thinks what ne'er was, nor is, nor e'er shall be."

THE SEQUEL OF TWO GREAT OPERATIONS.—At a recent meeting of the Basle Medical Society Professor Socin, of Basle, showed the stomach from a woman in whom he had performed, first, resection of the pylorus, and, subsequently, a year later, gastro-enterostomy. The patient died, from return of malignant disease, eighteen months after the second operation.—*Medical Record*.

THREE CASES OF LAPAROTOMY, WITH RECOVERY.

By CORNELIUS KOLLOCK, A.M., M.D., of Cheraw, S. C.

Case 1.—V. D., a dark mulatto; aged 30; married six years; has had one living child and a miscarriage at the fifth month of gestation; small in stature; height four feet nine inches; never weighed more than ninety pounds. Her general health has always been good. About a year previous to the miscarriage a fullness was observed in the left iliac region, and soon afterwards a hard lump was felt on that side. The patient increased rapidly in size, and at my first examination of the case, about two years after the miscarriage, she was enormously distended. The girth at the umbilicus measured 59½ inches. There was considerable emaciation; facies ovariana very pronounced. Drs. Lane and Napier had seen the case and twice resorted to tapping. A large quantity of viscid fluid was removed at each operation, as much as thirty quarts at one time. This afforded much temporary relief, but the fluid was soon reproduced. When I first saw the case, about seven months subsequent to the last tapping, the distension was greater than it had ever been.

There was some displacement of the uterus; it was drawn high up in the cavity, was retroverted and inclined to one side, was somewhat larger than normal, the cavity measuring fully three inches. Menstruation had been rather too free, but never so excessive as to create much discomfort. The abdominal veins were not in a varicose condition, but that is not an unerring pathognomonic sign; for though frequent in ovarian cysts, it is not universal. No fluid was drawn at this examination, for Drs. Lane and Napier were unable to get any through a large aspirating needle, and had to use a large size trocar, through which it flowed very slowly. Taking everything into careful consideration and estimating the value of all rational and physical signs, I concurred with Drs. Lane and Napier, and pronounced it a cyst of the left ovary.

On the 20th of October, 1885, the operation was performed, with the assistance of Drs. J. L. Napier, D. M. Prince, W. J. David, W. H. Jennings, I. A. Smith and R. Cox, Dr. Jennings presiding over the anæsthetic, chloroform. An incision of five inches in length was made in the median line below the umbilicus and the peritoneum

reached. More than the usual quantity of fluid was found in the peritoneal cavity. The abdominal walls were greatly thinned by excessive distension long-continued. The fibres of the recti abdominal muscles were separated and spread out like a fan. It was impossible to proceed canonically at this stage of the operation, as all the usual landmarks, the fatty layer under the skin, and the aponeurotic and intermediate tendinous or muscular structures, were so obliterated by pressure and distension as to cease to act as guides to the knife. There was very little bleeding, owing to the thinness of the abdominal walls, which seemed to be less than one-eighth of an inch thick.

As soon as the peritoneum was opened and the sac revealed, I saw the error in diagnosis. The dark hue and vascular condition of the sac convinced me it was not an ovarian cyst. Emmet's trocar was introduced and the sac evacuated. The fluid was of a dark brown color, indicating some admixture of blood, interspersed with streaks of a greenish tinge. There was no appearance of pus. The fluid was so thick, it flowed as would molasses or honey in cold weather. No sound could be heard as it poured into an empty vessel on the floor. A careful microscopical examination failed to detect the ovarian cell in the fluid. But that proves nothing. Formad says the ovarian cell is not always found in fluids from ovarian cysts, and is sometimes seen in fluids taken from cysts not on the ovaries.

The adhesions were formidable, extending from the pelvic cavity to the diaphragm. Some of them were large bands of vascular tissue, requiring one or more ligatures. A plexus of largely dilated mesentric veins also adhered to the cyst. Fortunately there were no adhesions to the liver or bladder, and those on the bowels were comparatively slight and easily broken up. This tumor, which proved to be a fibrocystic myoma, was attached to the posterior part of the fundus uteri, a little to one side, near the entrance of the left fallopian tube. It was not fastened directly to the body of the uterus, but was held by a pedicle about $2\frac{1}{2}$ inches long, which was a broad, thick band of vascular tissue, composed of a double fold of peritoneum, fitted in with vessels and lymphatics. How to ligate this mass with full assurance against hæmorrhage was a question for serious consideration. Knowing that this large band, with the immense sac above, must be generously supplied with blood-vessels, the number, size and relative position of which it would be well to ascertain before proceeding farther, I first applied a strong clamp and cut the pedicle above, near the sac. This

being done, two large arteries and a smaller one presented their open mouths. They were drawn out separately, and each was tied with silk ligature. A double ligature was then passed through the pedicle, between the arteries and firmly secured on each side. The cavity and peritoneum were cleansed and the incision closed with nine white silk ligatures. As there was much oozing from the multitude of vessels ruptured in breaking up the adhesions, a drainage-tube was put in, which did valuable service for three or four days.

The cyst weighed 48 pounds. The operation occupied 56 minutes. The patient was a good deal exhausted and very much troubled with nausea for a while, but reaction soon took place. She was comfortable the rest of the day and slept well till the latter part of the night, when she became very restless. Dr. J. L. Napier visited her the next day at 10 A. M. and found her in a very unpromising condition. The abdomen was considerably distended and tympanitic, pulse 150, temperature 106° , tongue dry and patient listless—almost unconscious. A pint or more of hot carbolized water was thrown into the cavity and drawn out. This was repeated several times till the water came away clear. In less than twenty-four hours the patient brightened up and was in every respect materially improved. Pulse was reduced to 100, temperature to 99. Patient is now (seven months since the operation) perfectly well.

I must express my thanks to all the gentlemen who aided me in this formidable operation, all of whom rendered valuable assistance. I was, however, under special obligations to Dr. J. L. Napier, who watched the case and conducted the after-treatment for several days in my absence. Faithful and diligent in attention, he displayed judgment and discrimination worthy of a veteran in the work.

Case 2.—Mrs. R. S. P., white, aged 31, married 13 years; has had two children, youngest 10 years old. Mrs. P. was married at 18 years of age and gave birth to her two children in three years time. Her general health was good for seven years after her last confinement, at which time menstruation began to be irregular as to quantity—was too free and lasted from four to six days, and was accompanied with troublesome uterine tormina. This condition, except in an aggravated form, continued for three years, each menstruation being more profuse, and the uterine pains becoming unbearable.

At the time of my first examination of the case the menstrual flow was at times more like a post-partum hæmorrhage, and lasted from

nine to fifteen days. The patient was greatly exhausted—much emaciated; the skin waxy white; the face and lower extremities œdematous. She was much depressed in spirit, and had abandoned all hope of ever being well again or even living much longer. In this she was not far from right, for she had lost about as much blood as she could spare. Superadded to this, the violent pelvic pains she was called upon to endure every four weeks had brought her to that state of exhaustion where nature must soon succumb. She could not possibly have lasted more than two or three months longer.

The emaciated condition of the patient aided much in making a clear and satisfactory diagnosis in the case. There was no displacement of the uterus, no flexion of the cervix; the sound passed readily into the cavity to the depth of two and seven-eighths inches. At the fundus, a little to one side, near the right horn, I discovered an interstitial fibroid, about as large as a medium size orange. It was oblong in shape, the lower extremity reaching the cervix. This, the patient informed me, had been perceptible to the touch for the past six months. It had doubtless been growing for several years, and was the cause of the trouble that was sapping the foundations of her life. Feeling assured in my own mind that nothing but surgical interference in this case could afford any relief, and that if Batty's operation, which he properly styles "Normal Ovariectomy," was ever justifiable, it certainly was in a case of this kind. The menopause generally hinges on amelioration in such troubles, if not complete relief. To wait for it in this case was absurd. The patient was only 31 years of age, and the natural menopause some twelve or fifteen years distant. There was but one course to pursue—the establishment of an artificial menopause. This was proposed and the consent of the patient readily obtained. In selecting a time for the operation, not too soon after one menstrual period and not too near the next, the 26th of December, 1885, was fixed upon as a suitable date. The emaciated condition of the patient and the thinness of the abdominal walls made the operation comparatively simple. An incision of three inches in length was made in the median line below the umbilicus and the peritoneum reached. There was a very slight flow of blood, not a drop of which escaped into the cavity. The peritoneum was now opened and search made for the ovaries, which were found in their normal position, and not above the pelvic brim, as might have been sup-

posed from the position of the uterus and the fibroid growth. The ovaries were drawn out and each pedicle ligated. The incision was closed with four white silk sutures, and the parts supported by adhesive strips. On the seventh day after the operation the sutures were removed, and the wound was found closed by the first intention. The patient recovered without an unfavorable symptom, and on the twelfth day was up and attending to some of her household duties.

The 6th day of January was the time for the next menstrual period. There was some commotion in the pelvic region for several days, but no discharge of any kind.

It is now nearly six months since the removal of the ovaries, the patient has passed six catamenial periods, and there has been no discharge of any kind, except during the February term, when there was only for one day a slight stain of the tissues, and the patient was unable to say from whence it came—from the uterus, vagina or from the rectum.

The patient has regained her strength and color, and is in the best of spirits. The fibroid has perceptibly decreased in size. But we must wait and see what is to be the result. Two years are generally required to prove whether or not this operation is a success. As so much relief has already been afforded, and as there are no indications of a recurrence of the trouble, it is safe to conclude that the relief will be permanent.

Case 3.—Mrs. B. P., aged 40, a bright blonde; the family on one side have a scrofulous taint; married twelve years; has five children, the youngest three years old. Mrs. P. has been a dyspeptic for a number of years, has had frequent attacks of indigestion, accompanied by violent pain and burning in the stomach and bowels and the most intolerable nausea, the latter sometimes lasting for a week at a time, during which period she was unable to take the simplest nourishment. During these attacks of indigestion her voice always leaves her and she is unable to speak above a whisper. About five years ago, soon after the birth of the third child, a fullness was noticed in the right iliac region. The growth increased rapidly in size and the abdomen became greatly distended. Respiration was much disturbed by pressure of the cyst against the stomach and diaphragm. For immediate temporary relief paracentesis abdominal was resorted to. Drs. Lane and David tapped her, and she

tapped herself a number of times by plunging the small blade of a pen-knife into the abdominal cavity. The patient also had umbilical hernia—a large knuckle of bowel protruding at the umbilicus. My first examination of the case was made sometime during the summer of 1885. I thus pronounced it a case of ovarian cyst, and advised an operation. The patient not being ready to submit to an operation then, waited till the spring of 1886.

On the 23d of March, at 11 A. M., the operation was performed in the presence of Drs. J. H. Lane, W. J. David, J. L. Napier, E. Miller, D. M. Prince, W. H. Jennings, J. L. Jordan and W. H. Steele. Dr. Jennings kindly administered chloroform. An incision of five inches was made below the umbilicus, in the median line, and the peritoneum reached. When the peritoneum was opened a large quantity of ascitic fluid escaped. This was doubtless the fluid that had been let out by the various tappings, as there was no evidence that the cyst had ever been entered by the trocar or by the knife when used by the patient. The sac now presenting was punctured by Emmett's trocar, when a thick, gluey, ropy fluid was discharged, very much like that drawn from cysts that have their origin on the broad ligament. The cyst evidently grew from the right ovary, and in process of development attached itself so firmly to the broad ligament and fallopian tube that it was necessary to ligate a portion of each and remove them with the ovary. Appended to the cyst, inside and out, were a number of what might be termed lardaceous tumors. They were solid to the touch, and when laid open were striated, presenting what seemed to be a combination of fibrous and lardaceous matter. The two largest of these tumors were attached to the inner wall of the sac and were as large as a man's fist. Others, to the number of twenty or more, were fastened to the outer walls, like barnacles to the bottom of old ships. In the larger and more advanced of these tumors the lardaceous matter was more abundant than in the smaller. None of them seemed to be cystiferous, and it is a question if a true cyst, lined with a fluid-secreting membrane, would ever be formed. The adhesions, with the exception of those to the broad ligament and tube, were not extensive, but very firm, requiring the knife or scissors and a strong ligature. They were thick bands of double folds of peritoneum, containing blood-vessels and well-organized tissue. The cyst weighed twenty-five pounds. The operation occupied one hour and

twenty minutes. The patient was a good deal exhausted, but soon rallied, and would have been comfortable but for the nausea, which lasted for several hours. After cleansing the cavity and peritoneum, the incision was closed by eight white silk sutures, and the parts supported by adhesive strips and an elastic flannel bandage. A drainage-tube was kept in three days and the cavity washed out every eight hours.

The patient made a good recovery and is now enjoying excellent health, better than she has been in five years. There has, up to this time, more than two months since the operation, been no accumulation of ascitic fluid in the abdominal cavity.

There was no use made of carbolic acid in either of these cases, excepting that used in the hot water in washing out the cavity. In that it was used with reference to its local anæsthetic properties, and not as an antiseptic. Carbolic acid is no longer regarded as the great poison-germ killer that Lister was wont to make it. It is now looked upon by many of the most experienced surgeons and parietomists as almost worse than useless. Keitte, Bantock, Von Buens, Hamilton, Lawson Tait and Kærberlé all say they do better without it than with it.

We believe the time is near when hot water, soap and clean hands will be considered the only reliable antiseptics.

INTERESTING CASES OF OPIUM POISONING.

Atropin as an Antidote—Artificial Respiration and its Utility—Resuscitation of a Patient who was Pronounced Dead—A Successful Prolonged Maintenance of the Heart's Action after Breathing had Ceased and the Patient beyond Remedy—Remarkable Resuscitation of a Still-born Child.

By W. T. CHEATHAM, M.D., of Henderson, N. C.

(Read before the North Carolina State Medical Society at New Bern, May 20, 1886.)

The rapid increase in the use of opium and its derivatives by the general public, without proper regard for intelligent medical advice, has engendered an unwholesome and pernicious state of society,

which has become painfully disastrous, both to the mental and physical condition of a large percentage of our population. Only a few years in the past the opium habit was a thing comparatively unknown, but to-day we witness an appalling spectacle in the ability of every city, town and hamlet to furnish its brigade, regiment or company, so to speak, of these unfortunates. The large amount of opium and its numerous preparations consumed by this class of individuals has created in the public mind a feeling of security against the immediate hazard likely to follow its improper administration. This illegitimate use and its consequent liberal administration for almost every conceivable complaint by persons uneducated as to its proper dose, therapeutic indication or physiological action, brings it in the domain of the medical practitioner, by far more frequently than formerly, to exercise his skill for the relief of persons whose lives are put in jeopardy by the injudicious administration of this potential poison.

I will, therefore, submit for your consideration the clinical history of a few cases, with some remarks in connection therewith.

Case 1.—A lady, aged 28 years, had neuralgic catamenia; called in a gentleman who was accustomed to administer morphia subcutaneously to his invalid wife, and prevailed with him to try his skill in her case. Urging the necessity for a large dose, he injected two and a half grains of sulphate of morphia. I saw her in company with Dr. J. S. Meadows an hour after its administration. The pupils were minutely contracted and insensible to stimulation; unconsciousness profound, with muscular relaxation and abolition of reflex movements; respiration slow, 3 per minute, shallow and quiet; face shrunk, palid and cyanosed; skin wet; heart pulsations rapid and feeble; atropia 1-24 grain was given subcutaneously; in twenty minutes 1-60 grain was injected, soon to be followed by its mydriatic effect, the pupils dilating widely; the circulation and respiration remaining unchanged for an hour, when the breathing became so indistinct and shallow as to require close inspection to determine whether or not she was living. Recourse was had to artificial respiration, which was practiced at intervals for three hours, when there was manifest improvement, the respiration being 5 per minute and not so shallow. Thenceforward there was gradual improvement, the circulation and respiration becoming better established. The first evidence of returning animation was at the experi-

ration of nine hours, and consisted in twitching of the muscles of the eye-lids. At the expiration of the eleventh hour she with difficulty swallowed some coffee, and was soon beyond danger. She informed me that before the administration of the morphia she took fifty drops of tincture of opium.

Case 2.—An old lady of 70 years, the wife of an opium-eater, had colic, for which he gave one-half grain of morphia; her suffering was so acute that his impatience got the better of him, and, without reflection, he gave two ounces of tincture of opium. I saw her six hours after its administration. She was senseless; skin wet and cyanosed; breathing stertorous and 4 per minute, with feeble and slow action of the heart; muscular relaxation, with abolition of reflex movements; pupils contracted to a fine point. I gave subcutaneously 1-60 grain of atropia, which was repeated in thirty minutes, the pupils dilating widely; but no appreciable effect was observable on the action of the heart or respiration. At the expiration of thirty minutes I injected $1\frac{1}{2}$ grain of sulphurate of strychnia, and repeated the dose in forty minutes. Its excito-motor action was soon made manifest by slight twitching of the muscles of the face and extremities, the respiration and action of the heart remaining unchanged. It was not long, however, before it was evident that the crisis was at hand, the respiration growing rapidly worse, to soon entirely cease; artificial respiration was now practiced, the ingress and egress of air being regulated to 12 or 14 per minute. Respiration was soon restored, to continue a few minutes and again cease. This vacillating condition of cessation and restoration of breathing continued for four hours, artificial respiration being had recourse to many times to re-establish the respiration and save her from immediate death. Thenceforth the improvement was slow, but permanent. It was seventeen hours before she was restored to consciousness and beyond peril.

Case 3.—A bar-tender, while in a state of inebriety, called to see him (Dr. J. H. Tucker), who prescribed a combination of bromide potassium and hydrate of chloral to quiet his excited and nervous condition. During the doctor's absence I was called to see him, and found him with phrenetic and hideous phantasms of delirium tremens, endeavoring to escape by a window from the second story of the building. I administered subcutaneously $\frac{1}{2}$ grain sulphate of morphia and left word for the doctor as to what I had done. An

hour afterwards he returned to find his patient in a state of profound narcosis. I was immediately summoned. He was senseless, with abolition of reflex movements; pulse feeble and rapid; respiration shallow and 3 per minute; pupils contracted to a fine point, with an absence of the cutaneous manipulations usually observed in opium narcosis (cyanosis and wet skin). Atropia, 1 60 grain, was administered subcutaneously; pupils dilating promptly, but without effect on respiration or circulation. Recourse was had to electricity, one pole being applied over the pneumogastric at the base of the neck, while with the electric brush the chest was faradized. (We failed to apply the opposite pole to the seventh intercostal space to obtain the direct effect on the diaphragm). Respiration now became so imperfect and vacillating that several times we thought him dead, to be resuscitated by artificial respiration. For five hours his case seemed hopeless, artificial respiration being necessary every few minutes to prevent immediate dissolution. He made a good recovery. This man has since informed me that he had partaken freely of various alcoholic mixtures, and a few minutes before I saw him drank a pint of Angostura bitters, a mixture used by shopkeepers to disguise inferior whiskey. In this case we had a mixed narcosis, the result of alcoholism, chloral, bromide and morphia.

Case 4.—A child 13 months old; had prescribed for it a chalk mixture containing tincture of opium. The physician prepared it extemporaneously, without proper regard to the quantity of the tincture to be taken in each dose. The dose must have been large, as the mixture was quite dark and emitted a strong opium odor. The mother stated that he poured it from a vial into the mixture without measuring or dropping. Eight hours had elapsed before I saw it. The eyes were glazed; the conjuction deeply injected, with pupils contracted to a fine point; abolition of reflex movements; the cutaneous surface dusky, purplish and wet; respiration 4 per minute and shallow; pulse scarcely perceptible and rapid. I practiced artificial respiration, regulating the ingress and egress of air to about 16 or 18 per minute. In forty minutes there was a decided improvement, the respiration 12 per minute, without the assistance of artificial respiration, and the pulse of better volume. In two hours and a half there was a return to consciousness. Artificial respiration was not practiced after the respiration had attained 12 per minute, the case being then left to nature.

Case 5.—A lawyer of stout build, with short neck and of full habit was on a spree. At 10 P. M., I was summoned in haste to see him ; I was met at the door by his doctor, who informed me that his patient was dying, and was about breathing his last ; thought he had apoplexy. I found him lifeless ; the cutaneous surface presenting a deep dusky purplish hue ; circulation rapid and feeble, with respiration 3 per minute and stertorous ; his mouth was open, with a frothy liquid bubbling out at each expiration ; the pupils were contracted to a fine point. My diagnosis was opium necrosis, but the doctor thought differently, as he had not prescribed opium or any of its alkaloids. I repaired to a druggist near by to obtain a solution of atropia. Finding his place of business closed, I returned as quickly as possible, and on re-entering the house I was informed that he was dead ; a gentleman was recording the time of his death on the wall with his pencil. On placing my hand over the præcordia I could distinguish feeble heart pulsation. I lifted him quickly, and, turning him face downward, at the same time pulling his head over the side of the bed, and with my hand making pressure over the stomach, about a quart of fluid escaped by the mouth and nostrils. This procedure was to prepare him for artificial respiration, there being a frothy liquid oozing from the angles of his mouth, which it was necessary to remove in order that there should be no obstruction to the entrance of air to the lungs. Artificial respiration was immediately instituted, the ingress and egress of air being regulated to about 14 or 16 per minute. It was thirty-one minutes before there was an attempt to respire, the effort being weak and ineffectual, no air penetrating the lungs ; and thirty-seven minutes elapsing before a successful respiration was accomplished independently of artificial means. Artificial respiration was continued with an occasional successful respiratory effort intervening. The improvement was gradual, but slow. In an hour and forty minutes he was breathing 5 per minute, but it was of a stertorous character. It was nine hours before there was a return to consciousness. This gentleman was resuscitated by artificial respiration alone, no other means being used. His wife, however, before I saw him, applied a hot smoothing iron to his feet, which burned one of them so severely as to require the use of crutches for several months as a means of locomotion. I was never able to ascertain the amount of opium or its alkaloids taken by this patient,

but it must have been large, as it was his custom while spreeing to take a grain or two of morphia at a dose of his own volition. He lived twelve months to die of pneumonia.

Case 6.—A boy, 8 years old, had acute basilar meningitis, derived by contiguity of tissue from disease of the internal ear. His suffering was intense; wild delirium, with agonizing cries from pain; ocular defects and disturbances; twitchings of the facial muscles; rigidity and contractions of the spinal and cervical muscles, etc. This was the first day of the disease. Two days previously the pulse was 60 per minute, the result of pressure on the medulla oblongata, with a temperature of 103° , but now the pulse was 170 per minute, with a temperature of 104° . This patient had received the treatment usually prescribed in cases of this kind. In consultation, all other means of obtaining quietude having failed, it was suggested that 1-6 grain morphia be given subcutaneously; to this I demurred, believing that the delirium would soon be succeeded by somnolence gradually deepening into coma, and that the morphia would hasten this inevitable condition, and perhaps be looked upon as the sole factor in its production.

This was explained to the father, an intelligent druggist, and with his approval, to obtain immediate relief from suffering, 1-8 grain morphia was injected, the solution containing atropia to antagonize its lethal effect. This soon produced quietude and apparently good sleep. We left to return in two hours; but in thirty minutes we were summoned in haste to find our patient senseless, with abolition of reflex movements and breathing 4 per minute; pupils dilated and the appearance of the skin normal. In a few minutes the respiration increased to 12 per minute, but soon became alarmingly slow, and suddenly ceased. I immediately instituted artificial respiration, regulating the ingress and egress of air to 16 or 18 per minute, the heart continuing to pulsate. With the assistance of Dr. J. H. Tucker and two young men, the artificial respiration was continued eleven hours and forty minutes' the heart continuing to act with remarkable vigor during the entire time, but at no time during that long period did the patient respire *per vias naturales* or make an effort at respiration. Indications of approaching rigor mortis were now manifest, the entire cutaneous surface being cold, with the extremities cold and stiff. Although the heart could be distinctly felt to pulsate, our efforts to maintain its action longer were discontinued.

In case 1st, I was very decided in the opinion that atropia, by its antidotal effect, saved my patient's life. This opinion, I think, was premature, and the outcome of my reading and investigation of this subject. Recognizing atropia's antagonistic effect on the iris, I readily embraced the doctrine promulgated that it was all-sufficient to counteract the deadly work of opium and its alkaloids taken in lethal quantities; but my subsequent experience has caused me to materially modify my opinion, and I now attach much importance to artificial respiration as a factor in producing the happy result, though imperfectly practiced in this case. In the cases of the old lady and the bar-tender, both of whom took atropia for its antidotal properties, without the aid of artificial respiration they must have perished. In the case of the child no antidote was given, and it is possible, but not at all probable, that it would have recovered without assistance; yet it is clearly manifest that artificial respiration put it beyond hazard, if not, in fact, saved its life. Again, in the case of the lawyer, who did not respire in thirty-seven minutes, can it be said that any other means than artificial respiration could have resulted in his resuscitation? And again, in the case of the boy in whom the heart pulsations were continued for eleven hours and forty minutes, can there be any doubt as to the wonderful efficiency of artificial respiration, or that he would have been saved had it not been for the cerebral complication? For the medulla oblongata and pneumogastric nerves regulate the respiratory movements so far as they are involuntary and independent of consciousness; therefore it is evident that the existence of disease involving the respiratory center, the medulla oblongata, precluded the possibility of resuscitation. This condition being fully appreciated, artificial respiration was practiced as a matter of experimentation, and we aver that the result was simply wonderful.

I do not propose to enter into a lengthy discussion of the supposed physiological action of atropia, but refer briefly to what seems pertinent as relates to its antagonism in opium narcosis. There seems to be no fixed principle by which we may be guided in the administration of atropia to obtain its antagonism. The hypodermic dose and the frequency of its repetition have varied in different cases between remote extremes. In one, for example, five doses each of 1-12 grain was given within as many hours (*Medical News*, xl. 123). In another case 1-10 grain was injected, and afterwards 1-4 grain (*Practitioner*, xxiii. 123). Fothergill gave one grain to

antagonize "12 to 17 grains of opium." Dr. J. H. Clarke administered 1-150 grain every half hour up to three doses (the pupils dilating), to counteract thirty grains of morphia and 1-1500 grain to antagonize 1 grain of morphia. In the *National Dispensatory* it is recommended that we administer 1-60 grain, and repeat until the pulse and respiration acquire more force and the pupils begin to dilate; and caution must be observed lest we substitute the narcotic action of atropia for that of opium. Dr. Bartholow is very positive that 1-120 grain is the dose proper to be given to obtain the antagonistic effect, "and this may be repeated every fifteen minutes (up to three doses) until the pupils dilate," then await the result of the antagonism. He gives strong caution against pushing the remedy, "lest we substitute belladonna narcosis for opium narcosis, and thus induce the state which its administration was intended to relieve." He also states that he has had some painful personal experience, and that "it is a fatal error to attempt to restore a patient to consciousness by repeated doses of belladonna, for the repeated action of these agents combined is to produce a profound sopor, and this is not a condition of danger so long as the pulse, respiration and reflex movements are in a good condition. To substitute belladonna narcosis for opium narcosis is only to increase the hazard under which the patient is already struggling." Dr. H. C. Wood thinks 1-40 grain a fair dose to commence with, and that 1-40 or 1-60 grain may be injected every fifteen, twenty or thirty minutes, as the urgency of the symptoms may demand; that the delicate, practical point is to decide how often to repeat the dose, lest paralysis of the nervous trunks is produced and the danger increased. It is difficult to harmonize the conflicting opinions, as to what is the proper and safe course to be pursued in the administration of the mydriatic for its antagonistic effect in opium narcosis. It is manifest, however, that too much caution cannot be exercised in the administration of this potential toxic agent; especially is this true when the nervous centers are in a state of narcotic paralysis. In those patients to whom I administered it for its physiological action on the respiratory and cardiac nervous centers it failed to sustain its high reputation, although (in every case) mydriasis was fully established. (Strychnia and electricity also failed.)

It may be that the failure to sustain its physiological record was due to diminished and paralyzed reflex susceptibility, the nervous

system being overwhelmed by the existing toxæmiæ, and therefore was not susceptible to the antagonistic action of the mydriatic, which perhaps might have been of value in sustaining respiratory and cardiac action had not the system been encumbered to the extent of paralysis of the nervous centers.

It is said by a distinguished writer on materia medica and therapeutics "that the stimulation of the vaso-motor centers by belladonna or atropia is not confined to the cardiac ganglia, but extends to the vaso-motor ganglia throughout the body and a general rise of blood-pressure takes place, owing to contraction of the arterioles. It is a singular fact that the influence of atropia rapidly produces a state of over-excitation, and the irritability of the vaso-motor nervous system at first increased, soon diminishes; the action of the heart becomes weak, the vessels dilate and the blood-pressure falls below normal. This statement is made in reference to the medicinal action of atropia, for he says: "In large medicinal doses this effect is easily seen." If this be true of atropia when taken in medicinal doses, it would materially damage its claim of antagonism in opium narcosis, when it is manifest that "the action of the heart becomes weak the vessels dilate and the blood-pressure falls below normal."

It is conceded by all observers that atropia, when taken in medicinal doses, primarily checks cutaneous transpiration, produces dryness of the mucous membranes of the nose, mouth, throat and larynx, and it may be that this action extends to the stomach, intestines, bronchi and pulmonary vesicles. Inasmuch as the function of excretion is most necessary to the maintenance of life, and atropia or belladonna, in its primary action, is possessed of the quality of checking the excretions of some, if not of all the most important emunctories, it seems reasonable that a therapeutic agent whose action checks transpiration would be of doubtful propriety, when the system contains noxious elements which must be eliminated by the organs of excretion before there can be a return to normal, and as these organs constitute the avenues by which the excrementitious products, containing the poisonous elements, must be eliminated, is it not pertinent to inquire if the primary action of atropia, by checking excretion, does not counterbalance the benefit likely to accrue from its stimulation of the cardiac and respiratory nervous centers? When belladonna or atropia is taken in poisonous

doses the primary action is not productive of sleep or narcotism, but excites delirious hallucinations accompanied by phantasms and spectral illusions. Yet when the hazard becomes great and the peril imminent, there is deep stupor and great muscular relaxation, with marked failure, both of the heart's action and of the respiratory forces, death being brought about by asphyxia. Therefore, when we consider the potential character of atropia for mischief, and the discrepancies of opinion that obtain as to the proper dose, and how far to push its administration to secure its antagonistic effect on the nervous centers, and its striking toxic similarity to opium toxæmiæ on the circulation and respiration, when there is imminent peril, must it not be considered an unsafe remedy, even in the hands of the skilled and judicious practitioner, and the propriety of its administration in this connection a question yet *sub judice*? Atropia holds such a prominent position as a physiological antagonist to the lethal principle of opium that many practitioners combine it with morphia for its specific protection when subcutaneously administered. This view is almost universally held as orthodox, and is perhaps due to the fulsome praises bestowed upon it by learned writers on materia medica and therapeutics. The time, however, has happily passed when the human mind is to credit the mere verba magistri or to place implicit credence in a scientific assertion without examination, because it proceeds from this or that individual. The rule of conduct implied in the language of the Roman satirist, "*Marcus dixit ita est*,"

"Did Marcus say 'twas fact! then fact it is;
No proof so valid as word of his,"

has been too much inculcated in all ages and no science has suffered so much from it as medicine.

We find in the recent works on materia medica and therapeutics that artificial respiration is recommended in opium poisoning, but is referred to *en passant* as an auxiliary to other means. I do not think it is held in sufficiently high esteem, as I am fully persuaded that this is the remedy *par excellence*, and better results may be expected from it when properly practiced than from all other known means combined. The practice of walking, flagellation, etc., could not have been of any value in the foregoing cases, as they were, without exception, in a state of total insensibility and profound

paralytic toxæmiæ, when first seen, yet they were all resuscitated, with the exception of the boy who had meningitis, and whose death was not attributable to the lethal effect of opium. I have been informed of several cases in which walking, flagellation, atropia, etc., were practiced, the patient being kept on the feet for hours, finally to die in a profound coma. It is manifestly apparent that in opium narcosis, the respiration being reduced to a low rate, and the heart-force being diminished, the blood being no longer sent through the pulmonary circulation with sufficient celerity, it becomes venous from defective æration, and another agent potential for mischief is superadded to the existing trouble, the blood becoming saturated with carbonic acid. The presence of this poisonous gas greatly increases the hazard, and to it must be attributed much of the failing circulation, embarrassed respiration and unconsciousness. This double profound narcosis is more rapidly produced when the respiration is shallow, and the normal vital capacity of the lungs is not attained during the respiratory act. The carbonic acid and the lethal principle of opium must be eliminated from the system before we can reasonably expect a return to normal ; and the lungs constituting the principal avenue for its elimination, the respiration should be maintained as near the normal as possible to attain this desideratum.

When the vital powers are paralyzed from the combined lethal effect of opium and carbonic acid the right cavities of the heart and the large venous trunks are evidently distended with venous blood. In consequence of the diminished frequency of the respiratory movements the blood is imperfectly decarbonized and the capillary circulation of the lungs is impeded, the action of the heart weak and the resistance *à fronte* increased, and it is obvious that venous stasis must take place. For the removal of this condition nature has furnished the remedy in air, which is possessed of the vitalizing principle necessary to a continuance of respiration and the promotion of cardiac action, without which we shall be unable to relieve venous stasis and restore a patient from opium narcosis. When the vital powers are not equal to the task of carrying on respiration, and thus furnishing the necessary supply of air to decarbonize the blood and enable the system to expel the toxic elements, the desideratum being to perpetuate life until the excess of poison is eliminated or destroyed, and the patient beyond jeopardy, we can

by artificial respiration furnish the air which is so necessary with a most reasonable certainty of success.

Various methods for practicing artificial respiration are in vogue. I shall not enter into a lengthy discussion of their relative merits, but refer to them briefly. Marshall Hall's ready method for the resuscitation of the asphyxiated has resulted in very marked success. Dr. Hall says the following has been demonstrated by experiments innumerable: "that if the subject be laid prone, and pressure be briskly made on the back, there is good respiration; and that if the pressure be removed and the body turned on its side, and a little more, there is good inspiration; that if this pronation and pressure and this removal of the pressure and rotation be instituted alternately, there is good respiration." It is claimed that Sylvester's plan is of great merit and is more generally practiced than any others. It differs from Hall's in the following: the subject is put on his back, the arms are grasped at the elbows and drawn above the head; then this manoeuvre is reversed, and the arms are pressed against the sides of the chest; "this to-and-fro movement" to be repeated at will.

Dr. Benjamin Howard has described a plan which he claims is of great merit, but it and the Michigan method, which very much resembles his, are too complicated to be readily utilized.

Dr. T. E. Satterthwaite's plan consists in placing the person on the back in the horizontal position, and making pressure on the abdomen so as to force the diaphragm upward, pressing slowly at first, and then, suddenly forcing the air out, withdrawing the hand, the diaphragm descending, the lungs inflate with air. This plan is certainly possessed of the merit of simplicity, and doubtless would prove of much value if practiced as an auxiliary to other means. In practicing artificial respiration the necessity for keeping the mouth open and the tongue well forward is very important, for it would be fatal to success to allow the tongue to fall backward, close the glottis and shut off the entrance of air to the lungs. I will briefly state my method as practiced in the cases described in the beginning of this article. With the patient placed on a bed close to its side, the operator seating himself on the edge of the bed, partially behind the subject, who is lifted to a semi-erect position, resting partly against the left side of the operator, the head should be made to fall slightly forward and to the side opposite to the

operator, with the mouth open ; the tongue falls forward and the way is clear for the entrance of air to the lungs. Then, placing the hands respectively in the axillæ from behind, the shoulders should be lifted upward, outward and forward, and held steady until you can count three, then let the shoulders descend slowly, at the same time making gentle pressure on the chest to expel the air. This movement can be regulated at will, and when skillfully performed the ingress and egress of air can be distinctly heard several feet away. I am of opinion that by this method the vital capacity of the chest can be raised to the maximum and the full benefit of artificial respiration obtained. When a child is born asphyxiated and there is no mechanical obstruction to breathing, and cold water has been dashed on the face with a view of acting on the medulla oblongata through the stimulation of the terminal branches of the fifth pair of nerves, and friction, flagellation and other means usually employed have proved abortive ; if we expect to save the child we shall have to resort to artificial respiration as the surest means for resuscitation. Insufflation is the only other method worthy of mention in this connection, and consists in blowing air from our lungs into the mouth of the child, using at the same time the precaution of closing the nostrils of the child. After each inflation the chest should be gently compressed in order to expel the air from the lungs.

The faculty of resisting asphyxia, that is, of living without breathing, is very much greater in the new-born infant than in the adult ; so, if a child should not breathe for a long time, it should not be abandoned and considered beyond remedy ; for it has been demonstrated that life may be restored, even after the heart has ceased to pulsate for several minutes, Josat and Brachet placing the limit at five minutes. It is worthy to be remembered that the asphyxiated infant should not be kept near a fire, for the colder the temperature of the air, the longer can asphyxia be resisted. I have had some very interesting experience in the resuscitation of asphyxiated new-born infants.

I will briefly state a case of recent occurrence of a most remarkable character :

February 13th Mrs. G., in her second pregnancy, had footing delivery, with retention of head at pelvic brim ; the funis came down with feet and ceased to pulsate. There was delay in the

delivery of the head, which was due to two causes: first, the hands were placed above the head, with the elbows resting on the pelvic brim, which condition had to be rectified; second, the pains were slow and ineffectual, necessitating a second interference for the delivery of the head. The delay from the time of cessation of pulsation in the umbilical cord to the final extraction of the head must have been fully thirty minutes. The father, to whom I announced that the cord had ceased to pulsate and that the child was dead, said he observed the time and that it was above thirty minutes before the delivery was accomplished. The child was pallid, with shrunken features, and the funis flaccid and devoid of circulation, it being cut before tying, no blood escaping. I made no attempt at resuscitation by the ordinary methods, but resorted at once to artificial respiration by insufflation. In three and a half minutes I could distinguish feeble heart-pulsations. It was forty-two minutes before there was an attempt at respiration, and an hour and fifty minutes' constant attention was necessary to preserve the child's life. This case, so far as I am informed, is without a parallel, with the single exception of the case reported by J. Foster Jenkins, M.D., in which the funis was pulseless for twenty-five minutes before delivery, and no attempt was made at respiration for thirty minutes after birth, more than two hours' strict attention being necessary to perpetuate the child's life. These cases come in direct conflict with the opinion so emphatically expressed by Sir Benjamin Brodie, who wrote in his "Lectures on Pathology and Surgery": "If the action of the heart, by which the circulation is maintained, should cease as a consequence of suspension of respiration, it can never be restored. This I positively assert after having made it the subject of a very careful investigation."

In conclusion, Dr. J. M. Hays, who is present, informs me that, while an interne at the Charleston Hospital, he witnessed a case of pulmonary emphysema produced by artificial respiration in the endeavor to resuscitate a still-born infant, and that the post-mortem demonstrated rupture of the pulmonary vesicles. This was evidently the result of too forcible inflation, and demonstrates the necessity for observing caution lest we destroy our chances for preserving the life of the child.

Since meeting with my friend and neighbor, Dr. Picôt, he has called my attention to an article by Dr. John Arthur Francis in the *Philadelphia Medical and Surgical Reporter* for May 15th of this year,

in which he describes what he calls a simple method of artificial respiration. It is this: The body having been laid on the back, with clothes loosened, mouth and nose wiped, two persons pass a narrow lever of any kind under the body at the level of the waist and raise the body till the tip of the fingers and the toes of the subject alone touch the ground; count fifteen rapidly, then lower the body to the ground and press the elbows to the sides, counting fifteen again, then raise the body again for the same length of time, continuing these movements until respiration is restored. The arms and legs are to be allowed to dangle freely when the body is raised.

SELECTED PAPERS.

INTUBATION OF THE LARYNX.

This surgical procedure for the relief of stenosis of the larynx has excited considerable discussion the past year. Its advocates claim that it has many advantages over tracheotomy, and that it will supersede that operation in cases of croupous or diphtheritic laryngitis, especially in young children. Intubation of the larynx was first proposed and practised in this country by Dr. Joseph O'Dwyer, of New York. Up to the present time there have been thirty-five operations reported by different surgeons, with thirteen recoveries.

Dr. O'Dwyer's instruments consist of a gag, five laryngeal tubes, an applicator, extractor and a gauge. The tubes range in length from $1\frac{1}{2}$ to $2\frac{1}{2}$ inches. Their calibre is only $\frac{1}{4}$ x $\frac{1}{4}$ of an inch in the largest, and not more than half this capacity in the smallest. The tube is introduced within the larynx and trachea through the mouth, and remains there. In one case reported it was retained a week without any detriment whatever. The upper end of the tube rests upon the ventricular bands, and does not interfere with the movements of the epiglottis. The lower end is about half an inch from the bifurcation

of the trachea. Slight ulceration may be produced by the head and lower end of the tube when retained for a long time. In most cases semi-solid food is taken well from the beginning, but it usually takes twenty-four hours for the child to learn to swallow liquids.

Dr. F. E. Waxham, of Chicago, has tabulated the various advantages of intubation over tracheotomy as follows:

1st. No opposition is met with on the part of parents and friends; quite a contrast to the difficulty with which we usually meet in obtaining the consent to perform tracheotomy.

2d. It relieves the urgent dyspnœa as promptly and as effectually as tracheotomy, and if the child dies, there is no regret that the operation has been performed, and no discredit attached to the physician.

3d. There is less irritation from the laryngeal tubes than from the tracheal canula. As the tube is considerably smaller than the trachea, it does not press firmly at any portion excepting at the chink of the glottis.

4th. Expectoration occurs more readily than through the tracheal tube.

5th. As the tube terminates in the throat, the air that enters the lungs is warm and moist from its course through the upper air-passages, and consequently there is less danger of pneumonia from this source.

6th. It is a bloodless operation.

7th. It is more quickly performed, and with less danger.

8th. There is no wound to close by slow granulation, and consequently convalescence is more rapid.

9th. There is no wound that may be the source of constitutional infection.

10th. The patient does not require the unremitting care of the physician, as in tracheotomy.

11th. It is a more successful method of treating croup, either diphtheritic or membranous, than tracheotomy.

In a recent number of the *New York Medical Record* (June 5th, 1886), Dr. O'Dwyer reports the results of the treatment with his tubes of a case of syphilitic stenosis of the larynx in an adult. The stricture of the larynx was such that immediate tracheotomy had been advised by another surgeon. Dr. O'Dwyer introduced through the stricture his smallest adult tube. It remained in the larynx fifty-six hours, when it was removed on account of the pain it caused. During

the time the tube was in the larynx the patient swallowed solids without much difficulty, but fluids produced more or less coughing. Five days later a larger tube was inserted, which, after having been in the larynx twenty-four hours, was coughed out. The following day a still larger tube was used, which caused some pain and irritation, and was expelled after having remained in position fourteen hours. The patient remained under treatment about three weeks, when she was discharged from the hospital with ample breathing space in the chink of the glottis, and no dyspnœa. She was readmitted two and a half months later, as the dyspnœa had returned. Examination showed that this was caused by subglottic stricture, as there was no material change in the larynx since she was discharged. Treatment was resumed for twenty-seven days, with tubes of gradually increasing size, when the stricture was again sufficiently dilated. The tube is now introduced once in two weeks, and allowed to remain in over night. Dr. O'Dwyer states that he soon intends to increase the interval to a month, which he believes will be often enough to prevent a recurrence of the stricture.—*Franklin H. Hooper, M.D., in Boston Medical and Surgical Journal.*

The question of operation in croup or laryngeal diphtheria may be said to be yet *sub judice*, although of late years the tide of professional opinion has been setting strongly toward the side of surgical interference. And although authorities are now almost unanimous in advising that tracheotomy be employed at one time or another in membranous croup, rather than to let the child die from strangulation, they are by no means at one in counselling an early operation, some maintaining that it should be undertaken immediately upon the appearance of the first sign of stenosis, others averring that it is a desperate measure, which is justifiable only when all other means have been tried in vain. And practitioners in general are still very loath to even suggest what they are wont to regard as an heroic measure and one of little practical utility. There is much reason for this. The parents and friends are naturally distressed at the thought of an operation, and, unless they can be assured of its success, will often refuse their assent to its performance. Again, tracheotomy is by no means the simple procedure which some of its enthusiastic advocates, with a greater fund of theory than of practical experience to draw

upon, would assume. Tracheotomy performed on the living subject, especially a child, struggling for air, with the larynx rising and falling at each labored respiration, and with the blood pouring from the turgid veins to obscure the delicate field of operation, is one of the most difficult tasks of the surgeon, and, taking into consideration the problematical chances of final success, is one which he assumes with no light heart. It is, therefore, not surprising that the operation has been slow in gaining recognition as a justifiable therapeutical measure, despite the fact that many lives have been undeniably saved by its timely performance. And if any more simple operation could be devised which could be shown to be of at least equal value, it would be welcomed.

We referred recently in these columns to the method of intubation of the larynx first proposed and practised by Dr. Joseph O'Dwyer, of New York. This method does away with the use of cutting instruments, and consists simply in the insertion of a tube of peculiar shape between the vocal cords, thus permitting of the passage of air into the trachea. Dr. O'Dwyer's experiments have been conducted very unostentatiously, and it is only through some very recent publications in the journals of New York and Chicago more particularly, that we have been able to obtain any data upon which to base an estimate of the merits of the procedure. Every new therapeutical measure must be judged by its results, and if on extended trial it cannot prove that it is better than some older and tried remedy, it deserves to, and surely will, fall into oblivion.—*Therapeutic Gazette*.

DR. ABBOTT ON "THE DISINFECTANT VALUE OF STANNOUS CHLORIDE" IN THE *Medical News*.—Stannous chloride may be used instead of corrosive sublimate on the following grounds: It is comparatively safe and does not corrode the pipes; it is also cheap. A one per cent. solution kills spores after an exposure of two hours. It is considerably more active than zinc chloride, copper sulphate, zinc sulphate and ferric sulphate. When intended to be kept for use it should be made up with an equal weight of ammonium chloride, which prevents the formation of the insoluble oxychloride of tin.—*Medical Chronicle*.

A CASE OF UNUSUAL RETENTION OF THE CANULA AFTER TRACHEOTOMY.

By Dr. EDMOND SOUCHON, Professor of Anatomy and of Clinical Surgery, Tulane University of Louisiana.

In the month of September, 1882, towards 5 o'clock in the afternoon, I was called in a hurry to visit the young child of Mr. S., which I was told was suffocating. Upon arriving at the house, I was informed that the child, a pretty little girl of four years, had been running bare-footed in the rain which had fallen that day. She was breathing hoarsely and with difficulty, but presented no symptoms of asphyxy. There were no membranous deposits of any kind in the throat and but few scattered râles in the lungs. I diagnosed the case bronchitis with œdema of the glottis. I prescribed the usual remedies and left. At 10 o'clock the same night I was called out again to see the child. Its condition was much worse. The breathing was hoarser, the face was turning pale, the lips slightly blue; throat was clear, but the mucous râles in the lungs had increased. Although I am, of course, decidedly in favor of early operation, I did not want to hurry too much, as I have seen many such cases get well without surgical interference; I insisted upon foot-baths, mustard, ipecac, etc., and as I knew well how rapidly these cases will grow worse in spite of all, I told the father to come at once for me if the breathing became worse, or if the lips got more blue. It was past midnight when he came for me, telling me that the child was worse than it had ever been. I hurried there, calling on my way upon Dr. Touatre to be so kind as to assist me if necessary. Upon reaching the child, it was found to be asphyxiating rapidly; the face was pale and ashy and covered with perspiration, the pupils much dilated, the lips very blue, as also the end of the fingers, the breathing hoarse, hard and difficult; the child restless. The operation was proposed to the father and mother, and urged as a pressing necessity, without which there was no hope. After some little hesitation on the part of the mother, she turned the child over to me, or, rather, I took it away from her, as the little patient was sinking rapidly. It was placed on a table in the adjoining room and the operation proceeded with as rapidly as pos-

sible with a restless child and bad candle-lights. The skin was incised, and the first ring of the trachea hooked firmly with a tenaculum to steady the trachea and at the same time raise it to the surface and pull it up from the sternum. This had barely been accomplished when the child became motionless, stopped breathing, and its little eyes remained opened, fixed and glassy; we took it to be dead, and were satisfied that it would have remained dead if left alone. The operation was rapidly completed without any trouble now, and as soon as the canula was secured in place we began to revive the child; the head was lowered, Dr. Touatre slapped the face and precordial region with the end of a wet towel and I practiced artificial respiration. After a minute's time the breathing was re-established and the child all right. From then things went on very well up to the ninth day, when, finding the child as well as possible, I attempted to remove the canula. As soon as this was done the breathing became very hard, hoarse and difficult, the child threw its head back and the face became blue all over. The canula was immediately reinserted, which was done without the least difficulty, and all the above symptoms disappeared. At the end of another ten days I made a new attempt to remove the tube, but all the same troubles reappeared and the canula had to be reintroduced at once. A third attempt was made later on with the same results, much to my annoyance and dissatisfaction. It had to remain in for three long months before it could be left out entirely without trouble. The child is now perfectly well, with no alteration of the voice. I have never seen, read or heard of such a case before, where the larynx was not organically and chronically diseased, and yet a tube had to be left in three months after an operation for a mere œdema of the glottis. Whenever I removed the tube I tried to see what the cause of the obstruction was, but never could succeed. To this day I do not know positively what the real cause of the trouble was. I can only conjecture that the wound in the trachea had granulated to an unusual extent, as the external wound does, and that one or two or several granulations which were kept apart by the tube contracted and closed more or less the internal opening when the tube was removed. In course of time they shrunk and ceased to obliterate the opening. I thought, of course, of using the laryngoscope, but in a young child it is almost sure to give no satisfactory result.

This case is, therefore, remarkable on account, 1st, of its nature, a mere œdema of the glottis, that is, a swelling with more or less effusion in the aryteno-epiglottic folds; 2d, the rapidity of its course—the child was well at 3 P. M., and had to be operated on at 12 M., that is, nine hours; 3d, by the impossibility for the child to breathe without the tube for three months; 4th, the obscurity of the cause of the obstruction to the breathing.—*N. O. Medical and Surgical Journal.*

NECROLOGY.

DEATH OF WILLIAM O. BALDWIN, M.D.

On May 30th, 1886, Dr. Wm. O. Baldwin died at his residence in Montgomery, Ala., where he had practiced his profession since 1837. Dr. Baldwin was born near Montgomery, August 9, 1818. His mother was the sister of United States Senator Benjamin Fitzpatrick, who was formerly Governor of Alabama. After receiving a thorough collegiate course, he took a course of reading in Montgomery, and then attended lectures at the Transylvania University, Kentucky, from which school he graduated in medicine in 1837. He took a very high stand in his class, and, at that time, gave promise of a very brilliant future. After graduating, he returned to Montgomery, where he was associated in practice with Dr. William M. Bowlin, for more than ten years, during which time he spent one year in Europe, where he visited many of the best institutions of medicine and surgery. He was a very active member of the Montgomery County Medical Society, and had been honored with all its highest offices. He was also a member of the Alabama Medical Association. He was present at its organization, and was afterward elevated to the office of President, which he filled with his characteristic ability. His contributions to the Transactions of this Association are very valuable, and reflect much credit upon the profession of Alabama. Also, his contributions to journal literature have won him no little reputation in this field. His "Observations on the Poisonous Effects of the Sulphate of Quinine" was one of his first contribu-

tions to medical literature, and was quoted both in this and foreign countries. He was devoted to his profession, and was ever willing to sacrifice much for its interest. While a great sufferer from the late war by the loss of much property, but more especially in the loss of his son, Capt. Wm. A. Baldwin, who was killed while leading his company in a bloody charge at Franklin, Tenn., still Dr. Baldwin, although this was the most severe sorrow of his life, did not lose sight of his profession's interest, and when the physicians of the South were invited to reunite with the American Medical Association, he at once advised them to accept this invitation, and attended the next meeting in Washington City in 1868. At this meeting he was elected to the presidency of this great organization, which was a fitting recognition of his great ability as a physician and worth as a man. It was at its next meeting in New Orleans that he presided, and delivered a message, as President, which filled every reader of its contents with joy and brighter hopes for the welfare of this country. It was full of patriotic sentiments, so beautifully expressed that it created a sympathetic feeling between the two sections, which has continued to increase since that time till the present, and was one of the first moves of reunion which have bound the North and the South so inseparably. His profession never ceased to confer their highest honors upon him, for only a short time before his death he received the nomination of First Vice-President of the International Medical Congress, to convene in Washington City in 1887.

Dr. Baldwin was a man of very studious habits, and hence became well informed. His knowledge was not limited to one subject, but he was thoroughly posted upon all. He possessed much natural ability, and with his ambition and application it is not surprising that he had arisen to such an exalted and enviable position in his profession. Few men of the South have been so highly honored as Dr. Baldwin, and none have been more worthy. He enjoyed a lucrative practice in Montgomery as long as he was physically able to perform its duties. He had accumulated considerable wealth, and was, at the time of his death, President of the First National Bank in Montgomery, which position he had filled since it was founded. He was a man of very fine financial ability. Six children survive him, two sons and four daughters. How much he was appreciated at home is well shown by the throngs of people that

attended his last sad rites. It is said that, as the hour of the funeral approached, the whole of Montgomery was moving toward the residence of Dr. Baldwin. People were there of every nationality and creed. There were no distinctions of religions or people in testifying the great esteem in which he was held. The floral tributes were of great beauty, and typical of the affection of those who sent them in such numbers. The procession was the largest that Montgomery has known for many years. They thus testified not only to his greatness as a physician, but the esteem with which he was held by his people as a great friend, who was capable of being their advisor and counselor.

In his death the medical profession has lost one of its brightest lights, Alabama her greatest physician, and Montgomery a citizen for whom any city would mourn.

"Thus pass away the men of might,
Whose noiseless footprints stamped the age;
Their thoughts that filled the earth with light
Still glow and blaze on memory's page.

"There's no death;
The stars go down to rise upon some fairer shore,
And bright in Heaven's jewelled crown
They shine forevermore."

—*Alabama Medical and Surgical Journal.*

RESECTION OF FIVE FEET OF INTESTINE.—Th. Kocher, of Berne, reports in the *Correspondenzblatt* a case in which he removed five feet of gangrenous intestine. The patient was a laborer, aged 57 years, who for many years had had a right inguinal hernia, about as large as a hen's egg; he entered the hospital suffering from an incarceration of the hernia, of twenty-four hours standing. Herniotomy was at once performed, and the intestine was found very œdematous and gangrenous. As the gangrene was very extensive, Kocher decided to perform resection rather than allow the gut to remain. The operation was performed under antiseptic precautions; thirty arteries had to be tied in the mesentery; after a drainage-tube was inserted, the wound was closed. The feeding was chiefly rectal. The wound healed without reaction or complications, and the patient was considered cured after eighteen days. Later on, he said that he had never felt better.—*Hospitals Tidende—New Orleans Medical and Surgical Journal.*

LANOLIN.

We gather from the *Therapeutic Gazette* for June that this new base for ointments is obtained from the alkaline water-washings of wool. It is a fatty body, consisting of fat acids, cholesterin and a varying percentage of water, forming a smooth, white, homogeneous mass of unctuous feel. Dr. Thomas G. Morton, of Philadelphia (*Medical News*), exhibited several specimens of the preparation, and says those who have used it are pleased with it in ointments for external application, as it can be readily rubbed into the skin, and it appearing that substances combined with it will be more readily absorbed than if combined with other bases. Its combination with water is remarkable. Dieterich, by experiment, determined the following as the quantity of water taken up by the different salve-bases named at 15° C. : camoline 4 parts ; lard 15 ; benzoinated lard 17 ; and lanolin 105. Dr. Keen, says the *News*, has used it quite freely of late, and reports one case of a child 8 years of age, with enlarged gland under the jaw, for which he ordered an ointment of 2 grains of iodine to a drachm of lanolin. In a week the swelling had entirely disappeared. This was a more prompt effect than he had ever seen from any other iodine applications. Lanolin has no tendency to become rancid, combines readily with fats, oils, balsams and most medicinal substances, and is unrivalled in its absorbability, assuring the greatest amount of allowable efficiency of medicines mixed with it.

It has been exhibited with good effect in psoriasis, herpes tonsurans, chronic dermatitis and the skin diseases marked by a callous epidermis. The *Gazette* advises that twenty per cent. of lard be mixed with the lanolin in ointments to secure its consistency.

TREATMENT OF MENORRHAGIA.—In young girls, as a rule, a powerful tonic treatment is required. Sometimes the iron is not sufficient, and I have to resort to astringents and tonics not ferruginous. I have used bichloride of mercury and quinine in these cases. Occasionally we meet with cases of this kind in which the patient apparently is in robust health. Under such circumstances I know of nothing better than iodide of potassium.—*Dr. Wm. Goodell.*

ANNUAL MEETING OF THE NORTH CAROLINA BOARD OF HEALTH.

NEW BERN, N. C., May 19, 1886.

The regular annual meeting of the North Carolina Board of Health was held in the Gaston House on Wednesday and Thursday, the 19th and 20th of May, 1886. There were present Dr. J. W. Jones, President of the Board, Drs. McDonald, Lewis and Hilliard, and Mr. Arthur Winslow and Prof. Simmons.

The minutes of the last meeting were read and approved.

The President appointed on the Auditing and Finance Committee Drs. McDonald and Hilliard, and Mr. Winslow.

Suggestions were asked for for a better mode of getting accurate reports on mortuary statistics.

Dr. McDonald thought in a State so sparsely settled as ours it will be a very difficult thing to get a report which will be worth anything. He said in his county there are three physicians who take the position of Superintendent of Health time about and the pay the County Commissioners allow is greatly inadequate to the services rendered. During his term of office he sends blanks to the physicians throughout the county and receives no responses from them whatever.

Dr. Hilliard suggested that each member of the Board take the section of the State in which he lives and try to stimulate the physicians in that section to work. That he should have personal conversation with them when possible, and when not to write letters.

Dr. McDonald offered a resolution, which was adopted, that the Secretary write circular letters to the postmasters in the county towns in the counties having no Superintendent of Health and ascertain who is the physician to the county, and try through that individual to get such statistics as will be of use.

Dr. Lewis said the county superintendents will not examine the prisoners sent from the county jails to the penitentiary because the commissioners will not make special provision for their receiving proper remuneration for such services. He thought it a good idea to interest the penitentiary authorities and the Governor in having the physician of the penitentiary inspect accurately each prisoner

on his arrival. When they see the good to be derived from such a course—that it will materially diminish the high death-rate among the convicts, for which they have been from time to time censured—he thinks they will readily comply with the recommendation. He regards the high death-rate among the convicts sent to the camps as resulting from the employment of men incapacitated for that kind of work. Nearly every report coming from the physician in charge of the convict camps shows men with phthisis and heart disease working on the railroads.

On motion, Dr. Lewis and Mr. Winslow were appointed a committee to consult with the Penitentiary Board and the Governor concerning these examinations. The following preamble and resolution for presentation to the Board and the Governor was adopted:

WHEREAS, It appears from the reports of the stockade physicians that among the convicts are many cases of heart, lung and other organic diseases, incapacitating them for such work as they are compelled to perform, and believing that an intelligent physical classification of all convicts would promote the ends of humanity and secure a decrease in the death-rate; therefore,

Resolved, That a committee of two be appointed to wait upon the Governor and Board of Directors and urge upon them the great necessity for a careful examination and classification of all prisoners.

On motion of Dr. Lewis, the Secretary was directed to write letters to all the circuit judges in the State, asking them, in sending the grand juries to inspect the jails and poor-houses, to charge them especially as to their sanitary condition, and also to request the county superintendent of health to accompany them on their visits of inspection that they may give them such information and suggestions concerning their sanitary condition and requirements as he may deem proper.

The President read a communication from the President of the Women's Christian Temperance Union, which, being without the sphere of the Board, was left to the President to reply to as he thought best.

It was decided that no advertisements be asked for for the "Bulletin" as long as the Board was able to publish it out of the regular appropriation for that purpose.

Dr. Lewis spoke of the evil resulting from the use of well-water for drinking purposes.

Dr. McDonald showed the difference between the effects of good and bad water—in his section, well-water is bad water—by citing the case of two families living side by side, one using cistern-water and

the other well-water. The latter were nearly always sick with malarial troubles, while the former were hardly ever sick. He recommended driven pumps, which vary from 30 to 50 feet in depth. In his locality they rest on a marl bed, and at first only sand is pumped out. This vacuum then fills with water which must be pure, as nothing can get into it to make it impure. On the coast it has been a great trouble to get water fit for use.

Adjourned until 2 o'clock P. M. Thursday.

SECOND DAY.

NEW BERN, N. C., May 20, 1886.

Meeting called to order at 2 o'clock.

Prof. Simmons said he had been unable to procure the instruments for the establishment of voluntary observatories in the State, Gen. Hazen saying the service could not furnish them free of charge. He, however, ordered the Government observers throughout the State to send monthly reports in to him, and also furnished him with free postage and sold him a set of instruments at first cost for the establishment of a station at Wake Forest.

On motion, the Secretary was instructed to write to Dr. P. L. Murphy, of Morganton, asking him to send monthly meteorological reports to Prof. Simmons.

Dr. McDonald read the following report of the Treasurer:

Disbursements:

Postage.....	\$ 53 93
Expense of meetings.....	396 50
Secretary's salary.....	1,200 00
Sundries.....	453 53
	<hr/>
Total.....	\$ 2,103 96

Receipts:

March 22, D. W. Bain.....	\$ 500 00
June 1, ".....	500 00
September 4, ".....	500 00
December 4, ".....	500 00— \$ 2,000 00
	<hr/>
Balance due Secretary.....	\$ 103 96

The Finance Committee made the following report :

Having examined the itemized report of the Treasurer, we recommend its adoption as recapitulated above; also, that the Salary of the Secretary begin at the time the appropriation was first accessible (January 1st, 1885).

We recommend, also, that the sum of five dollars per month be allowed for office rent for the ensuing year.

Also, that Prof. Simmons be reimbursed for his outlay of \$80.15 for meteorological and scientific instruments for the Board of Health, to be paid out of the next quarterly installment of the annual appropriation.

JOHN McDONALD,
W. D. HILLIARD,
ARTHUR WINSLOW.

Dr. McDonald moved that each member of the Board make an inspection of the drinking-water in his territory, and report to the President, with recommendations for the improvement of the same, to be published in a condensed form in the "Bulletin."

After the discussion of sundry subjects, the Board adjourned *sine die*.


MYRTOL.—Myrtol has only been, hitherto, studied as a curiosity. Dr. Linarix, in his doctrinal thesis, *De l'Emploi du Myrtol*, gives a complete account of the properties of this substance. Myrtol is both an antiseptic and a disinfecting agent. By its presence it prevents the decomposition of fermentative and putrescible organic substances; applied to the skin, it does not produce the slightest irritation, if the epithelium be intact. If there be a slight abrasion, a few drops produce a very trifling burning sensation, which quickly goes off. Myrtol stimulates the digestive faculties; all who use it find their appetite increased. In small doses, it acts as a sedative. It is eliminated by the lungs and kidneys, and has also a powerful balsamic action, but is more easily tolerated than most balsams. Its use is not followed by dyspepsia, nor by any of the other troubles attending the use of balsams in general. Dr. Linarix says that myrtol does not produce the same result at all periods of the affections of the respiratory system; in subacute and chronic catarrhal affections it should be administered when fever has subsided, then the sputa become less abundant, also less purulent. Six capsules daily, each containing fifteen centigrammes of myrtol, form a moderate dose, which should be taken before meals.—*British Medical Journal*.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., }
GEO. GILLET T THOMAS, M. D., " } Editors.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

A NEW WORK FOR THE STATE SOCIETY.

The adverse decision of the Society to the proposition for the establishment of a medical department at the State University, and the reasons of the majority of the committee who had it under consideration for their opposition to the movement, seem to us to be both just and practical. But there is behind this motion the worthy incentive which gave it birth, that the State Society should be active always in the promotion of any means which shall urge and assist the young men in the State to obtain a good medical education at a well ordered school of medicine. That was both the object and is the practical result of the work of the Board of Examiners. For the rigid scrutiny that this body has established over the qualifications of physicians offering themselves for practice, has

secured for the profession a class of young men better equipped than were their predecessors—coming fresh from schools where they have studiously applied themselves to be able to so creditably acquit themselves as to secure the license from the State authorities, as well as to obtain the diplomas which mark the successful termination of the scholastic life. Welcoming these young men to its ranks, and anxious to stimulate them to further endeavor, the Society has offered prizes for essays on different subjects pertaining to medicine, and to these Dr. N. J. Pittman, a man full of years and honors, and endowed with the graces of generous learning, has added another and larger one than any single one of the Society prizes, to be given for the best report of original work in the science of medicine. Such we regard as the intention of our honored brother.

These have been the efforts of the Society, first to improve the standard of the education of the physicians in the State ; and then, to keep alive the energy which the necessity for earnest study has inspired, they propose generously to stimulate the members to new work by making the labor bring a pecuniary reward. Now, in addition to these worthy efforts, there seems to us a new work opening for the Society, in aiding such young men as are unable to complete their education, by a donation from its own funds, or from funds raised for this special object and placed at the disposal of the Society. To secure proper persons upon whom to bestow these annual or biennial stipends, it should be necessary that the applicants submit to a competitive examination upon such subjects as the Society may choose, the general character of the examination being to test the elementary education of these persons, as well as to give some idea of their mental capacities. The details for the whole matter are few and simple, if the Society should favorably consider the scheme, and we offer it as a suggestion, if thought practicable, that a committee of competent persons, members of the Society, shall carefully canvass the proposition, offer this aid in such amounts and at such times as may be deemed prudent, and formulate the rules to govern the examination, and the basis of favorable decision for the competitors. Preliminary examinations will, in the near future, be indispensable to the study of medicine at the best schools in this country, and it will be consistent with the history of our Society to be pioneers to this extent in this movement.

MANURE HEAPS AND DIPHTHERIA.

There is an excellent opportunity offered for the collection of statistics upon the connection between manure heaps and outbreaks of diphtheria in the reports to be made by county superintendents of health to the Secretary of the State Board, and published in the monthly "Bulletin."

There is a growing belief that many cases of this disease in small villages and on farms are due to unhealthy heaps of manure being so near the dwellings of the owners as to be a cause of disease *per se*, or indirectly, by poisoning the drinking-water. The JOURNAL will be glad to know that a suggestion is well received to watch the appearance of diphtheria in the counties of the State, and to note the connection, if any, to unwholesome accumulation of ordure of any sort about the premises on which the disease prevails. The statistics will be valuable, and may serve to explain the cases of diphtheria in isolated and otherwise healthy localities, and which have so far been without known cause. The season for the increase of cases is near at hand, and we think it is none too soon to ask at the hands of county sanitary officials a careful study of the disease, to be reported through the "Bulletin." Or the JOURNAL will be glad to have the result of that investigation, as well as those of the physicians at large in the State who take an interest in the matter, and will make a report of their cases.

ACTION OF PANCREATIC JUICE.—The new researches of M. De-fresne have authorized him to express this opinion, viz: that the pancreatic juice at the commencement of a repast, passes into the state of zymogen in the circulation, and is afterwards separated by the liver, the parotid glands and the spleen. In the liver it becomes a hepatic zymosis, capable of saccharifying glycogen; in the parotids, a ptyalic zymosis, capable of saccharifying starch in the mouth; and in the spleen, a zymosis which, transmitted to the pancreas, communicates to the juice of this gland the property of saccharifying starch in the duodenum. These experiments demonstrate the good results which may be obtained by administering pancreatine by the stomach.—*Journal of the American Association*,

REVIEWS AND BOOK NOTICES.

HAND-BOOK OF PRACTICAL MEDICINE. By Dr. HERMANN EICH-HARST, Zurich. Vol. I. Diseases of the Circulatory and Respiratory Apparatus. Illustrated. Wm. Wood & Co. New York

This book is peculiar in the abrupt manner in which the author enters into the immediate study of diseases of the circulation, this constituting the opening section of the work. The preliminary chapters commonly found in treatises on practice of medicine, are missing, and we are inclined to feel relieved at their absence. This particular only seems to justify the calling this work a hand-book, and we deem it a mark of great modesty in the author to speak in such terms of his full statement of all points of diseases of which he treats. Throughout this section on the circulation the importance of sphygmographic tracings are insisted upon, and copious illustrations of the mode of examination are found in the earlier pages of the volume. This section contains a practical account of diseases of the pericardium, the heart-muscle, the endocardium, of neuroses of the heart and diseases of the aorta. The study of the affections of the endocardium is the fullest of these, and seems to us to be the most skilfully written. The article opens with septic endocarditis, the origin of which is definitely declared to be bacteriae. We confess, however, to a feeling of disappointment in reading his description of symptoms, which so nearly approach those of typhoid fever, on the one hand, or intermittent fever on the other, without definite symptoms referable to the diseased heart, that an autopsy seems to be the only way to reach a complete knowledge of the malady. The author says: "The chief aid in diagnosis is the appearance of embolic processes in the skin, the retina and the central nerve structures, emboli being the natural result of the disease, the vessels depositing them at any point in the circulation."

Of the nature of angina pectoris, p. 149, he says recent writers regard this a disease of the ganglionic system of the heart, special importance being attached to implication of the cardiac-plexus, made up of fibres of the pneumogastric and sympathetic, thus explaining the frequency of the disease in aortic disease, the plexus being beneath and behind the arch of the aorta. So, too, the inti-

mate nerve supply of the coronary arteries with the plexus explains the connection of the pain with disease of these vessels. For treatment, morphine hypodermatically holds the highest place, but caution is necessary in giving it to persons with fatty hearts. Amyl nitrite, nitro-glycerine and other old and well-known remedies are mentioned.

Diseases of the larynx are illustrated very freely by laryngoscopic pictures, and the microscope has done the same work for the sputa in bronchial affections.

In Part V. we find a most exhaustive and satisfactory article on hæmoptysis, probably as complete as any now in print in a work on general practice. Following this are descriptions of diseases of the lung, pleura, pulmonary artery and mediastinum.

The work is written in a concise, but clear manner, and will be found instructive reading.

MEDICINE OF THE FUTURE. By AUSTIN FLINT, Sr. The Address Prepared for the Annual Meeting of the British Medical Association, 1886. D. Appleton & Co., New York.

Dr. Flint had arrived, by right of years, intellect and unceasing study, at a point where he was entitled to calmly look ahead, and, without labored argument, forecast the coming days of medicine. He admits of no halt in the progress that must follow in the work that is doing everywhere, and in outline sees the development which the future certainly promises. He inclines towards the studies of the analytical chemist for more light in the true nature of the actions of the body in health and disease, with the belief that this branch of knowledge must carry investigation beyond the limits of the microscope, with all its increased lens, or new staining processes, or the best work of the spectroscope.

"Histology," he says, "may disclose agents, but it leaves us in the dark as regards the agencies." For an explanation of functions, the processes of nutrition and growth and the appearance of morbid products, the effect of agents, as poisons, on the actions of the body, we must look to the chemist, and not to the histologist.

The sense of hearing in the improvement of instruments is to aid, if not in many instances replace the sense of sight in the progress of medicine. In his enthusiastic hopes for their development he says that interthoracic sounds may be transmitted from the patient to the physician, no matter how far separated from each other they may be, and

these sounds may be phonographically preserved to be sent to a distance or kept for an indefinite period. He says that increasing experience will bring back venesection to be employed judiciously, and in skilful avoidance of the evil effects of the potential remedy, gain all the good that may come from so valuable a remedy rightly employed, restoring to its place what the late Prof. Gross has called "A Lost Art in Surgery."

Bacterial etiology being admitted, the future of medicine will consist more in prevention than in cure and in the substitution of hygienic measures for potent medication. There is to be improved and reformed, may we say compressed, medical literature, and increase of clinical, with less didactic teaching, to help on the future of the growth of medicine. The excessive development of specialism in medicine he regards as one of the dangers that menace the future, and he sounds the timely warning.

We cannot close this short notice of the last work of the great man without reference to the Christian spirit that marks it—a notable thing in these days of scientific skepticism. "The past history of medicine shows a law of progress; hence medicine will continue to progress. If we believe in an overruling Creator and Governor of the universe, everything, however great or however small, must be in accordance with a divinely ordered plan. The prevention and the successful management of diseases also enter into providential design. The past gives an assurance of progressively increasing security of human life from diseases. The progress of medicine belongs, therefore, in the order of Providence." Such is his faith, and its expression and the address which it adorns, are a fitting after-piece to so great and useful a life as that of the lamented Flint.

HYDROPHOBIA EXPERIMENT.—The first inoculation against hydrophobia ever done in America was performed July 5 by Dr. Valentine Mott, in the Carnegie Laboratory. Dr. Mott's patient was Harold Newell, seven years old, who was bitten by a dog presumably mad June 24. The inoculation was made from a solution of hydrophobic virus obtained by Pasteur himself from the brain of a dog dead from rabies, and transmitted by him through 110 rabbits. —*Journal of the American Medical Association.*

CORRESPONDENCE.

LONDON LETTER.

LONDON, June, 1886.

EDITORS N. C. JOURNAL:—As I have been attending at “Moorfields” now for several weeks, I can give you some account of the work there. The hospital is commonly called Moorfields, from the old name of that part of London in which it is situated. Its real name is Royal London Ophthalmic Hospital. It was founded in 1804, the first of its kind in the world, as it is also the largest. The number of cases treated as in-patients in 1884 was 2,028, as out-patients 23,568, with a total number of attendances of 117,840. It constantly increases, and this year will be much larger. The facilities for learning the diagnosis and treatment of diseases of the eye are admirable. You have an opportunity of watching the practice of men of the very first rank, with a supply of material practically unlimited. The fee for an attendance of six months is three guineas, or about \$15.75 of our money. The attending surgeons are Hulke, Lawson, Cowper, Tay, Tweedy, Nettleship, Gunn and Lang. Three of these are present every day. Before the patients come into the examining room they are seen by an official of the institution and given a paper with the printed name of the surgeon to whom each has been assigned. On these the surgeon writes the diagnosis, notes of the case, if it is an interesting one, and the prescriptions, and the patient is told to preserve it carefully. A few days ago an old man presented a paper that he had received fifty-two years ago, but of course they are frequently lost. Each surgeon has an assistant, who has a desk of his own. The surgeon sees, as a rule, the new cases only; when they come the second time they are turned over to the assistant. The six desks are in the same room, placed in a row, and you frequently see a crowd of patients standing in a line before every one. Besides the assistants mentioned there are several others, called clinical assistants, who do most of the ordinary work in correcting errors of refraction, and are generally students who have been in attendance for several months. This work goes on in the rear of the row of desks in the same room, and when you add from eight to a dozen students and casual medical

visitors who surround the surgeons or their assistants, you have a very busy scene. The room is rather small for the purpose, and is at times unpleasantly crowded. Having all the work going on together, however, is a great advantage. You can pass freely from one desk to another; you can devote the whole time to new cases at one, or go to the next and see the result of treatment in the old ones. With all this work, however, the surgeons are not so busy that they do not stop to give points on interesting cases, and they always readily answer any questions and respond freely to requests for fuller information in regard to any case. Little impromptu lectures are frequently brought out in this way. Cases requiring examination with the ophthalmoscope are taken into the large dark room adjoining the general examination room. Here there are movable gas-burners and seats for the use of the ophthalmoscope with twelve patients at one time. Students are allowed to examine cases.

The work usually begins at 9 o'clock, and at about 11 the house surgeon has the previously selected cases ready for operation, and one of the surgeons goes up stairs to the operation room. This is announced by the ringing of an electric bell, and anyone is at liberty to be present. When one man finishes another takes his place, there being usually three operators every day. The number of cases varies, of course, but when the total of operations of all kinds is 3,564 in a year, as it was in 1884, the number on any particular day is rarely insignificant. I have seen as many as five cataract extractions in one morning, the average being not far from two. Other operations are in proportion. All the operators whom I have seen use both hands, and each with apparently equal ease and skill. I am told by a man just from the continent, that there an ambidextrous man is the exception, and not the rule; so that, it is not at all essential, of course, for one to be able to use either hand. None of those mentioned above are in any special degree noted as skilful operators, as the elder Critchett was in his day, but Nettleship, Tweedy, Cowper and Lawson are all first-rate, not to mention others. We not only have the advantage of comparing the different methods of such men, but are also able to hear them discuss their differences among themselves, for two or three are frequently present at the same time. And as this is the center of ophthalmic practice in London, when distinguished foreigners are in the city we often have the benefit of their views, as was the case in the visits recently of Landolt and Galezowski, of Paris.

I was surprised to find that the practice of so many of the men who are distinguished oculists is not limited to the eye. Three, at least, of the staff of this hospital have appointments as surgeons to general hospitals.

In addition to this regular work of the hospital, two private courses of practical instruction are given. One is by Mr. Gunn, in the use of the ophthalmoscope. At each of the meetings of the class there is a short lecture on the condition of the eye in disease, as seen with the ophthalmoscope, but most of the time is spent in the actual examination of cases. There are several patients present each time, and each student examines them all. Mr. Gunn writes on a blackboard the appearances he finds, and is always present, directing the work and explaining difficult points. The other course is on errors of refraction, and is by Mr. Lang. It is on the same general plan. Patients appearing at his clinic in the morning having errors of refraction, are reserved for the meetings of the class, and the errors are then worked out and the glasses prescribed. All the ordinary methods of detection are employed, but special attention is paid to retinoscopy or the shadow test. This is by far the most valuable objective method, and is very satisfactory. It requires practice to become expert, but the more I use it, the better I like it. These classes are held at night, and so do not interfere with the other work. The number of students is small, and we are not overcrowded.

For a practical course in the operations on the eye, I have to go to the post-mortem room of St. Thomas' Hospital. This is conducted by Mr. Lawford, curator at Moorfields, and assistant ophthalmic surgeon at St. Thomas'. The class, which is limited to four, meets in the early morning, so that, after it is over, we can, by the aid of the Underground Railway, reach Moorfields, several miles away, in time to see the work there. St. Thomas' is one of the largest London hospitals. The building is an imposing modern structure, elegantly fitted up. It occupies a fine situation on the Albert embankment on the south side of the Thames, just opposite the houses of Parliament. Its seven large pavilions, jutting out at right angles to the main building into well-kept grounds, present a very handsome appearance, as seen from the opposite side of the river. The Medical School Building adjoins the hospital, and is supplied with the best appliances in every department. The museum, especially, is very large and well arranged.

My afternoons are spent at Dr. Morell Mackenzie's Throat Hospital,

in Golden Square. I had provided myself with an introduction from Dr. Bosworth, of New York, and when I called at Dr. Mackenzie's house I was very cordially received. He is a man of very distinguished appearance, is six feet or more in height, and well proportioned, and has a strong and handsome face. He lives in a region in the west end of London, that is almost entirely given up to the medical men—the neighborhood of Cavendish Square. In walking through it you read on the brass door-plates the names of such men as Paget, Clark, Hutchinson, Bryant, Erichsen, Jackson and numbers, of others famous the world over. He told me that he was now only a consultant at the hospital, and no longer held a clinic there, but that it was kept up just as before, and referred me especially to the surgeon who took his place, Mr. T. Mark Howell. He was Mackenzie's assistant for several years, and is regarded as a second Mackenzie. I found that Drs. Woakes, Whistler and others also held clinics at the same hospital.

Fortunately, all the work is done in the afternoon, and does not conflict at all with the clinic at the eye hospital. In the out-patients' room there are lamps and appliances for the examination of several patients at one time. One light is used by the surgeon who sees the new cases, a second by the one who sees the old cases. The few students who are present sit behind and look over the shoulder of the examiner, and when he has finished with the patient, anyone may take him to one of the other lights, arranged for that purpose, and examine him to his heart's content. The surgeon frequently offers remarks about the cases, and takes care that you examine those that are of special interest. The students, that is, those practitioners who attend the clinics and pay three guineas for three months, also assist in treatment, pass the Eustachian catheter and the like, and are frequently allowed to do operations, such as tonsillotomy. Ear cases are treated here as well as throat, especially those depending on throat diseases.

K. P. B., JR.

THE good effects which have occasionally followed the administration of manacæ root in rheumatism is probably due to an alkaloid extracted from it, which it is proposed to call francisceine. It has powerful purgative and diuretic action and is possessed of some diaphoretic and emmenagogue properties.—*London Lancet*.

FISTULA IN ANO.

Miss P. S., white, aged 27 years, consulted me about nine months ago. On examination I found a sinus communicating with the bowels and opening upon the nates, forming a complete fistula. As the opening was high in the rectum, and she was feeble, suffering from menstrual irregularity, I decided to wait awhile before using the bistoury, and prescribed Fellow's compound syrup hypophosphites in tonic doses. She suffered at times from constipation, and occasional clysters of chloride sodium and tepid water were advised. Sometime afterwards I received the following :

DR. :—I have found so much relief from the salt and warm water, that I am using it almost daily. That burning pain has entirely left me, and Fellows' preparation has wonderfully improved my health.

Very respectfully,

J. S.

Two months ago I saw her again, and rather to my surprise the fistula had completely healed and the lady much improved.

Will some medical friend give me his opinion in regard to the salt? Did it exercise any healing virtue in the case, etc.?

Very truly,

W. T. PAUL, M.D.

Atlantic, Carteret co., N. C., July 7, 1886.

THE ALABAMA MEDICAL AND SURGICAL JOURNAL.—We welcome with peculiar interest this new Southern Journal. For some years past the activity of the Alabama profession has been a noteworthy fact, and the excellence of the work done by the profession individually and in the several organizations of the State Medical Society, State Board of Examiners and State Board of Health have been gratifying indications of the progress of medical attainments in the South. No more substantial way could have been adopted to promote the interests of the professional work in that State, and we have evidences in this, the first number of the *Alabama Medical and Surgical Journal*, that the editors are fully aware of the nature of the work they have undertaken. The editors are Drs. J. D. S. Davis and W. E. B. Davis, of Birmingham, Ala. If they are able to maintain their Journal up to the standard of their first number, we are greatly mistaken in the qualities of the Alabama profession if they do not succeed,

NOTES.

SULPHUR SOLUBLE IN ALCOHOL.—G. Bloxam, in *Chemical News* (*American Druggist*) calls attention to the fact that sulphur crystallizes from its solution in hot alcohol in a white prismatic form. One practical point is in the use of rubber stoppers, from which sulphur may be dissolved, making a source of error in delicate chemical manipulations: "If a rubber cork be boiled with alcohol for fifteen minutes, a good crop of sulphur crystals is obtained on cooling the liquid. It is evident that if alcohol be constantly distilled on to a rubber cork the resulting error will be still greater."

DR. ARTHUR V. MEIGS, in the *Philadelphia Medical Journal*, recommends the following formula for food for infants:

Two	tablespoonfuls of	cream,
One	"	" milk (cow's),
Two	"	" lime-water,
Three	"	" sugar-water.

The sugar-water is made by dissolving $17\frac{3}{4}$ drachms of sugar of milk in a pint of water. The above mixture more nearly resembles in composition human milk than any other he knows of. In case of partial failure to digest the casein, resulting in fecal accumulation, he substitutes three tablespoonsful of water and a level teaspoonful of Mellin's food. He objects to the use of condensed milk, but admits he has seen it answer a good purpose in infant-feeding.

THE *Therapeutic Gazette* recommends that the use of one or two very large doses of the salicylates and the suspension of the drug long enough to prevent its accumulation in the system as the best means to secure its full effect. Only in cases of weak heart should there be fear of cardiac depression following free use of the drug, though the nervous depression which is caused by it may be, and, it is claimed, has been mistaken for a serious impression on the heart. Caution is needed, however, in the use of the salicylates in patients, subjects of chronic aural catarrh, as the tinnitus aurium which salicylic acid produces has been proved to be the result of an irritative congestion of the middle and internal ear.

DR. W. C. DABNEY.—We are informed that this gentleman is an applicant for the professorship of Medical Jurisprudence, Obstet-

rics and General Practice at the University of Virginia, made vacant by the resignation of Dr. James Harrison. Dr. Dabney is so well known to all the readers of current medical literature, that the announcement of his candidacy for the vacant chair in the University of Virginia will meet with a general desire for his election. We recollect in our student days at the University to have heard the late Dr. John Staige Davis say of him that he was one of the most promising graduates that the school had sent out, and his successful career has justified the opinion of his professor. He has our best wishes for his success. It will not be deemed amiss in this connection to say for many of his old students, that Dr. Harrison held a high place in their esteem, and he will carry to his retirement the pleasant recollections of many cheering words and timely acts of kindness to the young men who were under his charge, both as professor and chairman of the faculty.

THE MALARIAL GERM OF LAVERAN.—Dr. Sternberg (*Medical Record*) discusses at length the "Malarial Germ" of Laveran, which, he claims, is not a bacterial body, but an amœboid organism, which is parasitic in nature and infests the red blood corpuscles. These bodies, Laveran asserts, are found in quantities more or less abundant, as the character of the malarial infection is mild or pernicious. In proof of the claim of Laveran, Marchiafava and Celli submitted a number of persons free from malarial disease and from exposure to malarial influence to injection of blood drawn from the circulation of a patient already malarialized, and the fact that attacks of fever followed these injections following the types of malarial paroxysms, after variable periods of incubation, and were all cured by the administration of quinine, seems to these experimenters a fair reason to accept the assertions of Laveran. Dr. Sternberg cites his own laboratory experiments to show that the *bacillus malaria* of Klebs and Tommasi-Crudeli cannot be destroyed by an amount of quinine which it would be safe to administer. But the "amœboid blood parasite," as he designates the discovery of Laveran, is classed among the *infusoria*, and these seem more susceptible to action of the cinchona alkaloids. In a postscript to the article, Sternberg says he had an opportunity to verify the presence of these malarial germs of Laveran, in a specimen of blood drawn from a patient in the outset of an intermittent paroxysm.

The blood was immediately mounted and brought under the microscope, and the demonstration of the amœboid organisms was made to the satisfaction of Prof. Wm. H. Welch, in whose laboratory the examination by the microscope was made, and of several other medical gentlemen who were present.

MEDICAL SOCIETY OF NORTH CAROLINA.—We regret that our report of the proceedings of this Society has to be so materially curtailed. The North Carolina profession is a peculiar one—it seems not to be aware of its own excellence. It is seldom heard from through journals published outside of the State. North Carolina is wanting simply a city sufficiently large for a distinctive medical centre. But knowing personally, as we do, many of the doctors of North Carolina, and having a like acquaintance with many of the profession of other Atlantic States, we are constrained to acknowledge that, rank and file, North Carolina furnishes the best educated doctors of any of these States; and numbers of them, were they to locate in medical centres, would shine out as brilliant stars in the galaxy of great men of the medical profession of America. We attribute a great part of this special excellence to the strict fidelity with which the North Carolina State Board of Medical Examiners has been doing its work for the past twenty years.—*Virginia Medical Monthly*.

A CASE OF RE-INJECTION OF BLOOD DURING AMPUTATION AT THE HIP-JOINT, WITH RAPID RECOVERY.—(By A. G. Miller, M.D., Edinburgh). In a case of strumous disease affecting both hips, the left knee and the left elbow, with a large abscess connected with the left hip, the patient being in very feeble condition, amputation at the latter joint became necessary. The limb having been exsanguinated to the middle of the thigh, and a powerful elastic tourniquet applied at the groin, a rapid circular cut was made right down to the bone in the upper part of the thigh, the femur sawn through, the femoral artery and some smaller vessels tied, and the tourniquet removed; some hæmorrhage still occurring from a few small vessels, they were also ligatured. All the blood which escaped, both from the femoral artery and the smaller vessels, amounting to eleven ounces, was caught in a vessel containing a solution of phosphate of soda and re-injected into the deep femoral

vein. By an incision on the outer side of the thigh the head of the femur was then dissected out. The wound was dressed antiseptically. The patient suffered no shock whatever, nor depression of temperature after the operation. For the first few days he was flushed and had a fuller pulse than before the operation, but he had no rise of temperature. The weakness and the anæmia of the patient, together with the increased vascularity of the parts due to the disease, rendered it very likely that he would not have survived the operation had not the greater part of the blood lost been re-injected—the fact being that from the exsanguification of the leg, together with the reinfusion, there was probably an ultimate gain of blood after the operation.—*Edinburgh Medical Journal—Annals of Surgery.*

SCIENTIFIC ADVANCE IN THE TREATMENT OF TUMORS OF THE BRAIN.—Experimental research is constantly adding to the resources of the curative art, and is aiding to achieve new triumphs over diseases hitherto beyond reach. A correspondent writes: "In a paper read before the Royal Society on June 10th, Dr. C. E. Beevor and Prof. Victor Horsley, F.R.S., gave the result of an experimental investigation of the functions of that area of the cortex of the brain, which Dr. Ferrier showed to be the centre of the movements of the upper limb. They found that, when the upper part of this area was stimulated, the movements which followed commenced in the shoulder; that, when the lowest part was stimulated, the movements commenced in the thumb; and that, when the intermediate part was stimulated, the movements commenced in the wrist. These phenomena will be seen to be in agreement with the observations on the priority and the "march" of movements made by Dr. Hughlings Jackson in the particular type of epilepsy to which his name is often applied. It was not long before an occasion arose for applying the knowledge gained by these experiments to the cure of disease. A man was admitted into the National Epileptic Hospital (to which both Dr. Beevor and Mr. Horsley are attached), suffering from Jacksonian epilepsy, by which he had been incapacitated for two years. The fits began in the thumb; and Dr. Hughlings Jackson, under whose care the patient was, believed that the case was one to which the new knowledge with regard to the situation of the centre for the thumb might be applied, although the symp-

toms diagnostic of tumor were very vague. Owing to the great difference in complexity between the brain of the monkey and of man, there was, when the investigations of the functions of the cortex of the brain were first undertaken, considerable difficulty in applying the results obtained. At the present time, however, these difficulties have been almost completely overcome, and the relation of the cranium to the subjacent convolutions has been thoroughly worked out. Mr. Horsley, therefore, although the patient presented no external signs of disease, and the skull had not been injured in any way, was yet able, by measurement, to apply his trephine over the cortical area which contained the thumb-centre. On removing the piece of bone cut out by the trephine on its first application, a tumor was detected immediately beneath. The hole made by the trephine was enlarged, and the tumor, together with the rest of the thumb-centre, was freely excised. As in the case to which reference was made a fortnight ago, Mr. Horsley treated the wound on precisely the same principles as those which he had found to be successful with monkeys after experimental operations, and the result has left nothing to be desired. The operation in this second case was performed on June 21st, and the wound healed by immediate union, so that on June 26th there was only a very small granulating surface, where drainage had been maintained. We find, on inquiry, that a week after the operation, the man was quite well, had had no fits, and was recovering power in the paralyzed limb. The other patient, upon whom Mr. Horsley operated three weeks ago, is also in excellent health, and has had no fits since the operation; it will be remembered that this man was suffering from traumatic epilepsy of a very severe type, and that the operation consisted in the excision of the scar in the brain. The second case, however, which we now record, is distinctly more remarkable, inasmuch as there was no wound or other external sign to guide the operator, who had to depend entirely on the knowledge of the anatomy and physiology of the brain gained by experiment, combined with the pathological generalization established by Dr. Hughlings Jackson. It is not too much to say that the successful termination of these two operations proves that a new departure in the treatment of certain diseases of the brain has in truth commenced. In operating on monkeys, it has been found that the wound in the brain and membranes and scalp, made in the operation of trephining, will, as a rule, heal in

four or five days ; and this case of Mr. Horsley's shows that the same holds good with man when the line of treatment is the same. These two cases will form an interesting subject for discussion at the meeting of the British Medical Association at Brighton. The subject of cerebral surgery will be introduced by Mr. Horsley, who will explain his method of treating the wounds ; and among the large mass of illustrative material which he is bringing together to illustrate his paper, will be photographs of these patients before and seven days after operation, showing the condition of the wound at the latter date. The discussion is certain to be of the highest interest, for both Dr. Hughlings Jackson and Dr. Ferrier have expressed their intention of taking part in it. It would be rash to speak of either of these two cases at present as cured ; it is possible that the traumatic epilepsy may recur, and that the patient from whose brain a tumor has been removed may have another elsewhere within the cranium ; in both cases, however, a hopeful attitude is fully justified ; the probabilities are distinctly in favor of the anticipation that the cortical tumor was solitary, and will not recur. The point in treatment, and a very important point it is, which has been established is, that the operation of excising a tumor from the cortex of the brain is unattended by danger to life when the wound is treated on the basis of the knowledge acquired by recent experimental research on the principles which have been found to be successful in monkeys.—*British Medical Journal*.

OBITUARY.

PLEASANT P. PEACE, M.D.

Dr. Pleasant P. Peace died at his residence, in Wake county, on the 25th of June. He was born in Granville county, educated at William and Mary College, graduating there in 1842. Three years later he received his degree of M.D., and began his professional life in his native county. During the war he first served as surgeon to Green's battalion, but desirous of being actively engaged among the fighting men, he entered the 47th regiment as a lieutenant, under Capt. J. J. Davis, of Franklin county. After the capture of Capt. Davis, at Gettysburg, Dr. Peace commanded the company until June 2d, 1864, when he was dangerously wounded, and was permanently invalided.

He was a consistent member of the Presbyterian Church, and his life was an illustration of his religious profession.

SAMUEL B. FLOWERS, M.D.

Dr. Samuel B. Flowers was born the 31st of October, 1835, and died the 6th of June, 1886, aged 50 years 7 months and 6 days. He obtained his medical education at the University of Philadelphia, from which institution he received his diploma in the spring of 1857.

The first three years of his medical life were spent in Camden, Ark. In his adopted State he had in this short period established himself well, and everything seemed bright and prosperous to him.

At the beginning of the war he laid aside all personal aggrandizements and home pleasures and joined the medical corps of the Confederate Army. In this position he rendered efficient service, remaining there till the last. At the close of the war he returned to his native State and to the home of his boyhood, and began anew the practice of his profession. He soon established himself, and gained the full confidence of the people.

About twelve years ago he moved to this village, which is only a few miles from his old home, and here he followed closely and continuously his avocation till his death.

He was a physician of rare attainments, endowed with a fine mind, quick perception, good memory and sound judgment. He was a close student, keeping well abreast with the numerous changes and rapid advancements made in our profession. With these embodiments of success, need I add that he was a very successful physician?

His energy was unbounded, ready at all times, and willing to go to administer to the sick and suffering. His will-power was indomitable and his hope unmeasurable. With these strong exponents of character, he was the surprise and wonder of his daily visitors during his last illness.

He suggested and insisted on the course of his treatment all the way through. His hope of getting well kept him buoyant and alive for days and days. After the hopes of his many friends and visiting medical brethren had withered and gone, his hope still kept up, and he would speak often of what he intended doing as soon as he got well.

In his death our community has sustained an incredible loss, his patients their best friend and adviser, our profession one of her safest, soundest and best physicians, and his family more than language can express.

He leaves a widow and nine children, with a host of friends, patrons and medical brethren to mourn his untimely death.

I. W. FAISON, M.D.

Mt. Olive, N. C., June 30, 1886.

BOOKS AND PAMPHLETS RECEIVED.

Ohio State Sanitary Association. Third Annual Meeting.

Quiz Compend of Pharmacy. F. E. Stewart, M.D., Ph.D.

Memoir of Austin Flint, M.D., LL.D. By A. Jacobi, M.D.

Some Observations on Health Resorts. By E. O. Otis, M.D.

Report of the North Carolina State Horticultural Society, 1885.

Ethics of Female Sterility. By A. Reeves Jackson, A.M., M.D.

The Pneumatic Cabinet and Pneumatic Differentiation. By F. Donaldson, Jr., B.A., M.D.

The Sanitary Conditions and Necessities of School-Houses and School Life. By James F. Hibberd, M.D.

Cremation of Human Bodies not a Necessary Sanitary Measure. By Frank H. Hamilton, A.M., M.D., LL.D.

Personal Observations of the Value of Cocaine in Nose and Throat Surgery. By Frank Donaldson, M.D.

Clinical Lectures on Orthopædic Surgery. Delivered at the Philadelphia Hospital by A. Sydney Roberts, M.D.

A Contribution to the Pathology of Hemianopsia of Central Origin (Cortex-Hemianopsia). By E. C. Seguin, M.D.

The President's Address. Delivered before the American Gynecological Society, at Washington, D. C., September 23, 1885. W. T. Howard, M.D.

The Student's Manual of Venereal Diseases. Being a Concise Description of those Affections and their Treatment. Berkeley Hill, M.D., and Arthur Cooper, M.D.

Boston Society of Civil Engineers. Papers Read at a Special Meeting held March 3, 1886. Comparative Size of Metric and Old Units with Reference to Convenience. By Fred. Brooks, Member of the Society. Report of Committee on Weights and Measures.

Two Obstetrical Heresies. By S. F. Startley, M.D.

A Lecture on the Code of Medical Ethics. By G. E. Frothingham, M.D.

Cataract. Report of Fifty-two Cases, with Remarks. By Jos. A. White, M.D.

A Few Suggestions for the Preparation of Milk for Infants. By John M. Keating, M. D.

Report of a Case of Successful Transfusion in Typhoid Fever. By Wm. S. Whitwell, A.M., M.D.

Hydrophobia. M. Pasteur and His Methods. A Critical Analysis. By Thomas M. Dolan, M.D., F.R.C.S.


Some Points of Interest Connected with the Wanklyn Method of Sanitary Water Analysis, Particularly on the Detection of Recent Sewage. By Charles Smart, Major and Surgeon U. S. Army.

READING NOTICES.

HAVING made arrangements with the *Therapeutic Gazette* and *American Medical Digest* by which we can offer those valuable journals in combination with the NORTH CAROLINA MEDICAL JOURNAL at reduced rates, we make the following offer to new subscribers and to those who wish to renew their subscriptions :

THE NORTH CAROLINA MEDICAL JOURNAL and

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 These prices are strictly in advance.

THE UNIVERSITY.—We are glad to see the University offering free instruction to its graduates and those of the other colleges. Students who desire special training in Latin or Greek or Engineer-

ing or Chemistry or any study, will find it at Chapel Hill. Professional teachers are offered the advantages of a special course under Prof. Henry, while they may at the same time pursue any other studies. Considering the size of the Faculty, the equipment of the laboratories, the method of imparting knowledge, the number and character of the students, and the cost, we can unhesitatingly recommend our University as not excelled by any in the United States for our boys. For announcement, see our advertising columns.

THE MALTINE MANUFACTURING COMPANY has just issued a new form of its excellent preparation of Malt, which, being less viscid than formerly, is more agreeable to the taste. They are also making compounds of several different medicines with Maltine, among which we especially note Maltine, with *Cascara Sagrada*. The well known value of *Cascara* as a gentle and painless purgative, and the emollient properties of Maltum, make the compound one promising much good.

MAURICE HACHE, M.D., 8 Rue de Tournon, Paris, May 18, 1886, says: "I have tried BROMIDIA in two cases, one patient suffering from a slight febrile affection, the other a victim of acute insomnia; in the latter case various preparations of Opium had proved useless, and the administration of chloral was followed by lassitude and congestion in the head.

BROMIDIA produced sound sleep in both of these cases, unaccompanied by any unpleasantness on awaking. In my opinion this preparation is destined to render good service, and I intend prescribing it whenever the opportunity presents itself.



NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLET THOMAS, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

MULTIPLE FETATION—TRIPLETS.

By W. L. CRUMP, South River, N. C.

(Read before the North Carolina Medical Society, at New Bern,
May 21, 1886.)

In the records of 37,441 cases of accouchement that occurred at La Maternité, in Paris, says Cazeaux, "there were only 5 cases of triplets"—one case in about every 7,490 labors. Having been so fortunate as to attend one, and observing some interesting features connected with it, other than its extreme rarity, I am encouraged to submit the following report :

Case.—I was called, about 3 P. M., of the 22d February, 1886, to attend Mrs. E., whom the messenger informed me was in labor. As I was in the act of starting to a similar case, it was impossible for me to see her, so I referred the messenger to another physician. I heard no more of the case until the 26th, when her husband came for me to see her, saying that his wife had not been confined on the 22d, and was very uneasy concerning herself. I called and gathered

the following history : That this was her second pregnancy, with an interval of four years and five months since the first, when she gave birth to twins. Had been married five years ; aged 38 years. On the return of messenger (who had been sent for me on the 22d) they had procured the services of another physician, who arrived about dark of the evening of same date. After an examination, he informed her that she was in labor, but as it would be sometime before labor would come off, he would give her a large dose of morphia, and thereby enable her to procure a good night's rest. She took the drug and slept well until the following morning, when, her pains being very slight, the physician informed her that the labor had been suspended, and directed her to send for me again whenever it was reinstated. After gathering the foregoing history, I proceeded to an examination, and was immediately struck by her enormous size and the uniformly smooth surface of the abdomen presented to the touch—no inequalities whatever being appreciable. It seemed to me that the distension of the abdominal walls could not have been a degree more without a rupture ensuing. She was, at this time, complaining of pains throughout the abdominal region, that were evidently due to the extreme muscular tension. She informed me, further, that she had felt no foetal movements since she had awaked from the effect of the morphia. Requiring her to remain in bed and to maintain a recumbent posture, with knees drawn up to relieve, as much as possible, the muscular tension, I prescribed a placebo, and directed her to send for me again when necessary. On the following Sunday morning, 28th February, I was summoned to her in haste. Just as I stepped into the room the membranes ruptured spontaneously, and at 10:30 o'clock (fifteen minutes probably after rupture of membranes) the first child was born—dead. External examination, now, showed but very little diminution in size of abdomen, and on passing my finger into the vagina, I could barely reach the membranes of the second child intact and high up in utero. In a short time the uterine contractions began anew, and, after waiting about twenty-five minutes, the second sac was easily ruptured by the finger, and the second child was born—dead. I again placed my hand on the abdomen and found it still too large. I thought, however, that the want of subsidence must be due to the placenta, which were probably unusually large. In five or ten minutes, however, the

uterine contractions began the third time, with markedly less vigor, though, than after birth of first child, and, on passing my finger as far as possible into the uterus, I was astonished to feel the flaccid membranes of a third child presenting themselves. The uterine contractions continuing feeble, and finding it impossible to rupture the membranes with the finger, I inserted a sharp-pointed probe into the sac, and let off the water. At 11:30 o'clock the third child was born—dead. In a half hour the placenta—one for each child, with separate and distinct membranes—were delivered without any difficulty, thus completing the labor.

RECAPITULATION.

	Age.	Weight.	Confinements 2.	Interval bet. 1st and 2nd Confinements.
Mother's.	38 yrs.	120 lbs.	1st Twins.	4 years and 5 months.
Father's.	26 yrs.	130 lbs.	2nd Triplets.	

SALIENT POINTS IN SECOND LABOR

	Presental.	Sex.	Weight.	Hour.	Rupture of Memb's.	Condition of Children.
1st Child.	Breech.	Boy.	5 lbs. †	10.30.	Spontaneous.	Dead.
2nd Child	Head.	Boy.	5 lbs.	11.00.	Finger.	Dead.
3rd Child	Breech.	Girl.	4 lbs. †	11.30.	Probe.	Dead.

Remarks.—There are several points of interest connected with this case worthy of more than a mere passing notice.

I. THE PLACENTAL DEVELOPMENT.

In this case we find three separate and distinct placenta—one for each child—and each having, independent of the others, a complete set of membranes. One placenta, with its membranes, is entirely separate and apart from the others, whilst the remaining two seem, at the first glance, to be one common after-birth for two of the children. On close examination, however, a fibrous union between the two can be traced, and it is very evident that they have no other connection with each other than this, and that they are in reality separate and distinct. The chorions of these two placenta are merely in intimate apposition, and can be easily separated without tearing or other injury to their individual entirety. Now, this individuality of the

placentæ and membranes presents an anatomical anomaly of such unusual occurrence that I am unable to find a similar case recorded.

Cazaux reports two cases only of a like nature. One, that of Dodd, reports the placentæ consolidated into one, with a common chorion for two of the children, while the third child had a separate one; in the other, recorded by Davis, the three fœtuses had a common decidua, with a common chorion for two of the children and a special one for the third child.

II. OVULATION.

We have here, as is shown by the disposition of the membranes, a rare specimen of multiple ovulation. M. Guillemot, who has particularly studied the subject of multiple fœtation, formulates four distinct varieties of the disposition of the membranes in such cases. The two first varieties, only, are of interest to us in the study of this particular case. He (Guillemot) says—and here he is speaking of twin pregnancies, but the application of the rule to cases of triplets is natural—

1. Two ovules are fecundated and each embryo is developed and is surrounded by its own proper membranes.
2. The ovule has two germs, though each fœtus has but a single envelope, the chorion being a common membrane.

The cases recorded by Davis and Dodd were a combination, as respects their ovulation, of these two varieties carried by nature one step further and made to apply to triplets, thus: in both cases there was a common chorion for two of the children, formed according to Guillemot's second variety from a double ovule, and a special chorion for the third child, formed according to first variety from a single ovule. Now, applying this rule to this particular clinical case, it is evident that there must have been an expulsion of three separate ovules at or near the last catamenial period, and that each ovule developed its own proper membranes, thus laying at the first step of gestation an anomalous foundation for this most anomalous case. Further, it is fair to conclude that both ovaries must have been engaged in the process of ovulation at the time, for it is highly improbable that one ovary could mature and expel so many eggs at one time.

III.

Having briefly reviewed the salient points in this case which characterize it as an anomaly, we come to the consideration of the most practical and important feature, which is embodied in the speculation

as to the probable cause of the death of these fœtuses. It will be remembered that there were fœtal movements perceptible to the mother just prior to the administration of the morphia (given by the physician, who supposed her to be in labor on the 22d of February), and from that time to the delivery of the dead children, there had been no movements perceptible. I wish to relate here a personal clinical experience. I was once called to a woman in labor, and, finding it in the initial stage and progressing slowly, I pursued the common practice of administering an ordinary dose of morphia by mouth. The drug was given about 8 or 9 o'clock P. M., and just before the administration of the same fœtal movements were plainly perceptible to my own sense of touch. The mother procured several hour's rest, and was delivered, about 7 or 8 o'clock of the following morning, of *twins*—dead.

I could find no rational cause for their death at the time—the possibility of the morphia being a factor not occurring to my mind then, nor until I met with similar results after its administration in this case of triplets. No more than “the coming of one swallow makes a summer” does the report of these two cases establish a new clinical truth or controvert an old, accepted theory, yet they surely serve as significant data for rational speculation, and suggest the practical query: In suspected multiple fœtation is the administration of morphia to the parturient woman good practice or safe? There are several facts in support of the negative of this question worth consideration.

1. *Children of Multiple Fœtation are of Diminished Vitality.*—The natural law of reproduction is the generation and development of *one* fœtus, and if the generative supply intended by nature, under this law, for the development of *one* fœtus is distributed amongst *three* children, it necessarily follows that the individual members of the three must be in a state of diminished vitality, and by parity of reasoning this is applicable, in a less degree only, to twins.

Vital statistics in regard to triplets well attest the truth of this proposition. I have been unable to find a single authentic case of triplets in which all of the children lived, and but one in which any of the children lived more than a few weeks. They almost always die in a few hours after birth from an apparent want of vital resistance.

2. *Children in Utero are Susceptible to the Action of Poisonous*

Drugs.—Dalton says in his "Human Physiology," page 761: "Even medicinal substances, taken by the mother, may transude through the placental vessels, and thus exert a specific effect upon the fœtal organization."

Cazaux records cases in which poisonous drugs, taken by the mother, were found by analysis in the body of the fœtus. It is unnecessary to add quotations of a similar nature from other authors to sustain the truth of this second proposition. Its practical application to this case is easily made thus: The morphia was taken into the blood of the mother in a state of solution, and a portion of it was carried into the placenta, and transuded thence through the thin walls of the maternal vessels and umbilical radicles into the fœtal circulation, by which means it entered the bodies of the three fœtuses. Now, this poison must of necessity have remained in the bodies of the children a sufficient length of time to have endangered life, for it could only have been eliminated from the system, in the main, by means of, and through, the return of circulation, and the very force, the fœtal heart, which insures this means of elimination is especially susceptible to the action of this particular poison. According to Bartholow the effect of a lethal dose of opium on the heart is "to produce a slow and feeble action or a rapid and feeble action, and finally paralysis of the organ." In consequence of the resistance *a fronte*, by reason of the number and curvatures of the umbilical arteries and the diminished action and loss of power of the fœtal heart *a tergo*, a venous stasis must result, thereby furnishing conditions most favorable to the deleterious action of the poison on the fœtal structures—notably the heart, resulting in paralysis of that organ and the death of the fœtuses. Coupled with these conditions we find another in the pre-existing want of vitality in the children themselves, which, alone, placed them in a position to offer but feeble resistance to a poison so inimical to early life. Bartholow says: "Especially is the susceptibility to its (opium) action great in early life." Now, if these deductions are true, then has the negative been sustained, and we can embody a practical truth in the following formula: In suspected or diagnosed multiple fœtation, the administration of a salt of morphia to the parturient woman is fraught with extreme danger to the children.

THE DRY TREATMENT OF CORPOREAL ENDOMETRITIS.

By S. D. BOOTH, Oxford, N. C.

(Read before the North Carolina Medical Society, at New Bern,
May 21, 1886.)

For many years I have thought that a great improvement might be made in the treatment of inflammatory affections attacking the lining membrane of the unimpregnated and non-puerperal womb, could we safely and easily apply our curative remedies in a dry and powdered form.

The advantages to be gained by such means of applying remedial agents are numerous and obvious. The difficulty in applying solutions or any medicines in a liquid form, freely and uniformly, has been met and recognized by every gynecologist.

The uterine syringe, in its varied forms and multitudinous devices, such as the reversed current, grooved and fluted tubes, double canula formations, and tubes within tubes, has been almost entirely discarded and laid aside as not only unsatisfactory in its operation, but a dangerous instrument, except in cases of abortion, when the os and cervical canal are wide open, giving easy and quick exit to the injected fluid. The most satisfactory way of making these applications has been by means of the flexible metal applicator, well armed with absorbent cotton, properly applied to its distal end and dipped into, and well saturated with the liquid, which is designed for the treatment of the case in hand.

The applicator thus armed may generally without trouble be carried through the os and cervical canal into the cavity of the body of the womb. The internal os, being, generally in cases of corporeal endometritis, wide open, it offers no more resistance to the passage of a probe or other instrument than does the cervical canal. But when the cotton reaches the cavity of the uterine body the liquid is found to have wiped off, so that the fundus and walls of the organ are very slightly, if at all, touched by the medicine. To obviate this difficulty and remove this drawback to the successful treatment of the disease under consideration, recourse has been had to various means and devices with varying degrees of success. The cervical canal has been enlarged by means of tents made of sponge, laminaria, etc. Still the

operator often finds, to his disappointment and chagrin, after the removal of the tents, although the canal of the cervix and uterine os are capacious, its walls collapse and fall together. So that the cotton, in its passage through the canal, though not entirely deprived of its contained liquid, as in undilated cases, has been rid of the medicine on its exterior, and the corporeal endometrium receives but a scant supply of the liquid so much needed in that especial locality.

The uterine dilator has been used by some very eminent gynecological surgeons to separate the walls of the cervix, while the applicator is being passed. The closed blades of this instrument are pushed into the cervical canal until their points have reached the internal os; then the handles are pressed together until the blades are separated sufficiently to allow the easy passage of the applicator between them. This arrangement is better than that of the tents; but those parts of the uterine walls which are covered by the blades of the dilating instrument are not touched by the medicine, and there is not such an excess of the fluid left on those parts which are accessible, to admit of their supplying the needed remedy to the covered portion after the blades of the dilator have been withdrawn.

By far the best and most thorough means of application is one which I had been pursuing for some years, and afterwards saw recommended by Dr. Mundé in his valuable book on minor gynecological surgery. That author uses a silver or gum-tube one-fourth of an inch, more or less, in diameter, and eight or ten inches in length, by introducing one end into the uterus and then passing a small applicator through it. Simply a male gum catheter cut off at the small end answers very well. I generally carry two or three sizes of catheters cut off ready for use in my instrument-bag. I also carry some small white-oak "applicators," which can be carried entirely through the piece of catheter. After introducing the catheter I wrap absorbent cotton securely around the little white-oak split, and, after soaking it in iodine, phenol, or whatever medicine I wish to use, I carry the split through the catheter up to the fundus of the uterus; then I withdraw the catheter over the split, leaving it with the cotton and medicine in the uterine cavity. After allowing it to remain a few minutes until the contractions of the uterus set up by the presence of the medicine have ceased, I withdraw the split and cotton. In that way the medicine is freely

and fully applied to the inflamed endometric membrane, but still the results are rarely satisfactory. The medicine already in solution is greatly diluted by the uterine secretions, whose flow is augmented by the irritant effect of the medicine, so that, in some instances, unless the medicine is absolutely cauterant in action, it is washed or carried off before any considerable alterative effect can be produced. Should the remedy be one of the metallic salts, especially the nitrate of silver, its chemical constitution will be so changed by contact with salts contained in the secretions, that in many instances it becomes almost totally inert. Under any circumstances, medicines applied in a liquid form to the lining membrane of the uterus rarely ever remain in contact with the diseased tissues a sufficient length of time to produce the amount of effect which we desire, unless the parts are cauterized.

Every gynecologist will admit that many gentle sufferers have been relieved and a large number of ladies with undoubted endometritis have been cured by the ordinary means of applying remedies in a liquid form to the lining membrane of the body of the womb, yet, as an established means of treatment, we must all acknowledge that it has not been satisfactory. Just at this time medical men seem to be waking up to the probable advantages which may be derived from the "*dry treatment*" of uterine troubles.

In the last few months I have seen in the journals various allusions to the subject, but no author, so far as I know, has suggested a way, or given the remotest hint at a possible means of applying dry medicines to the membranes lining the cavity of the body of the womb. Numerous practitioners have thrown or sprinkled medicines in a dry and powdered form into the vagina, and one writer in the *Journal of Therapeutics* speaks very highly of the treatment of all inflammatory affections of the unimpregnated womb by means of dry medicines applied to that organ on cotton left in the vagina. I was surprised at the enthusiasm of the writer, and regret exceedingly that I mislaid the paper containing the articles, because I failed to understand how the inflamed endometrium could be so immensely benefited through the agency of a remedy thus applied, for it is certain that the remedy could touch no part of the lining membrane of the uterus except that part which is contained in the vaginal vault. Still, as I indicated at the

outset, there are great advantages to be derived from the direct application of various medicinal agents to the inflamed endometrium. The strength of the remedy can be better controlled, it will remain in contact with the inflamed surface much longer, its chemical constitution is less subject to be altered because it meets with the uterine secretions more gradually and proportionally in smaller quantities. It also separates the inflamed surfaces, and for a considerable time keeps them from contact with each other, which is no small consideration in the treatment of inflamed serous or mucous surfaces. In this way we can avail ourselves of many valuable agents, which cannot be utilized in any other way because of their slight solubility. For instance, bismuth and the powdered chlorate of potash, as well as various others. Now, the question is how to apply these valuable and useful, as well as innocent and pleasant medicinal agents, to the inside of the walls and to the fundus of the uterus in a dry and powdered form, and at the same time with perfect safety? I began the experiment a few years ago by rubbing together subnitrate of bismuth with the nitrate of silver—12 parts of the former to 1 of the latter, and putting this powder into the end of a catheter previously cut off at the small or front end with an ordinary gelatine capsule filled with the same material and slipped over the end. After carrying the loaded capsule through the os and cervix and up to the fundus, it was an easy job to push the medicine out at the end of the catheter by means of a wooden rod, having a shoulder cut a distance from the end corresponding with the length of the catheter. In this way the medicine and capsule are left in the uterine cavity, and the rod of wood thus guarded and arranged cannot possibly wound the uterus. Some cases did remarkably well by this means of treatment, but if the uterus chanced to be very irritable, considerable harm was done to the sensitive membrane before the capsule had time to dissolve, and occasionally I found that the capsule was so slow in dissolving that the medicine was by no means equally distributed over the uterine cavity, and in some of these cases, the medicine and capsule were forced away very little altered by the action of the uterine secretions. I was trying to invent some better and safer means of applying these powdered medicines to the cavity of the womb, when about a year ago, I noticed in the houses of many of my

patients a very ingeniously constructed arrangement for throwing "*insect powders.*"

By means of this arrangement I noticed that the powders could be thrown, not only into the various corners and crevices of the chamber, but also into the small cracks and crevices about the furniture and bedsteads, following and destroying vermin and small insects in their narrow hiding-places.

It occurred to me, forthwith, that this little apparatus might be utilized in accomplishing the object which I so much coveted and which had, up to this time, foiled my inventive efforts.

This little machine is not unlike a small oil-can in appearance. It is simply a small tin box about the size and shape of those which we have so often seen serving the purpose of holding "Mason's" blacking. It has a spout fastened to its edge, and through this spout the powders are forcibly and easily thrown when the top is pressed upon. There is more in the construction of this tin box than we might suppose at first sight. The top is made partly of metal and partly of leather; in the center of the top there is a metal plate about the size of a silver half dollar. To the edge of this piece all around is fastened leather which extends, and is fastened to, the edge of the box. A spiral spring sets on the bottom of this box and extends to the plate in the middle of the leather top. When this box is taken into the hand and the thumb placed upon the metal plate in the top, you only have to press, and the powder in the box is forced out through the spout; remove the pressure and the spiral spring on the inside forces up the top again, and the box receives air through the spout and becomes inflated again. At the bottom of the box there is an aperture for the admission of powders. This aperture is stopped with tin-covered cork when the box is used.

In using this box, I have retained the male catheter as a uterine tube through which the powders are conveyed from the box to the uterus. By this means, there is no trouble in throwing the powders into the uterus, but the spout has to be withdrawn from the catheter at each stroke of the apparatus, otherwise the uterine secretions are drawn into the catheter, and, mixing with the powdered medicine, a thick, doughy plug is formed, which is removed from the catheter with great difficulty, even after it has been withdrawn from the uterus. Could the box receive air in any other way, the spout

would still have to be withdrawn from the catheter at each stroke, otherwise the uterus would speedily become inflated, and air would be forced through the fallopian tubes, carrying with it unhealthy spores, causing innumerable troubles; because the walls of the cervical canal closed around the catheter would offer more resistance to the imprisoned air than would the unobstructed fallopian tubes.

On account of these obstacles and hindrances, I was not satisfied with my discovery, but had to make only one more step to construct an apparatus which would throw an unlimited quantity of powdered medicine into the uterine cavity and cause the accompanying atmospheric air to escape at each stroke of the instrument.

Attached to the new apparatus, at its posterior edges, is a piece of gum-tubing, containing a closely-fitting valve; through this it gets its air, instead of having to receive it through the spout. The top is part leather, with a metal plate in the center, similar to the old one, and the same spring arrangement obtains on the inside. Instead of having the box round, it is conical, with a rounded base. By making the front in the shape of a cone the angles and corners are dispensed with, and the flow of powders from the box to the uterine tube is unobstructed. Attached to the box, at the apex of the cone, and extending from that to the uterine tube, is a piece of gum-tubing $2\frac{1}{2}$ inches long. In this tubing there is a good tight valve, which works in an opposite direction from the valve which admits the air. When the top is pressed down, this valve is thrown open, and the powders pass from the box to the uterine tube, but it closes when the pressure is removed; so that, while the box is being inflated through the agency of the posterior valve, no suction can take place through this front valve, and consequently no moisture can be drawn from the uterus into the tube. The uterine tube is 9 inches long. The main pipe is a little less than $\frac{1}{8}$ of an inch in diameter; then there are two small lateral pipes, one on each side of the larger one, $\frac{1}{16}$ of an inch in diameter. These small lateral pipes begin at the distal end of the other, and extend only half its length. Through these small lateral pipes the air escapes at each stroke of the box, from the middle to the uterine end of the pipe. This triple arrangement gives it a flat appearance, and the entire triple structure is less than $\frac{1}{4}$ of an inch wide, and not $\frac{1}{8}$ of an inch thick, so it can be easily passed through any ordinary cervical canal

when the disease under consideration exists. The uterine pipe is connected to the tubing by means of slip-joint, so that it may be detached from the apparatus each time that it is to be introduced. Then, instead of having to go through the awkward operation of securing the box to the pipe, you have only to slip the smooth, well-fitting end into a socket already prepared for it. I have made my article too long, or I would enumerate a number of troubles, in the treatment of which my "*Endometric Duster*," or uterine dry syringe, might be used with great advantage. I will, however, just allude to the fact that some forms of vaginitis yield to this dusting arrangement more readily and surely than to any other treatment at my command.

There is a form of eruptive vaginitis in which the whole vaginal mucous membrane, including the lower portion of the cervix uteri, is covered with little pimples. This form of trouble is generally attended with a most provoking and ceaseless itching of the vulva, and the ordinary remedies seem to have scarcely any tendency to modify its harassing existence. I have known a single dusting over of the upper part of the vagina with a mixture of one part of nitrate of silver and twelve of bismuth, or bismuth alone, to the internal portion of the labia, to stop the itching and burning; and a second application made in like manner to cure the case entirely. This condition of "*pruritus vaginæ*" is not an uncommon attendant upon endometritis, and no other complication of that disease gave me so much trouble until I adopted the dry treatment; but now I dread it no longer. I have treated a few cases of gonorrhœa with the powder-thrower, and with marked success. In one case I used salicylic acid and morphia. It was quite powerful, but did not excite inflammation, and a marked improvement followed its application. In a small number of cases I have used bismuth, 30 parts, argenti nitras, 1 part, morphia sulphate, 2 parts, and these cases recovered more rapidly than I have known the disease to do under any other treatment; however, care must be taken that air is not thrown into the bladder, for the urine will be decomposed and cystitis set up, as I have seen happen in one case. While I am digressing, I must state that dysentery, in its early stages, might, with great advantage, be treated with this dusting arrangement. Nothing could be more salutary in its effects, it seems to me, than a thick coating of bismuth, containing a small amount of morphia,

sprinkled over the inflamed and irritable mucous membrane of the rectum, as the disease is confined almost exclusively to that locality in its inception.

Before closing, I wish to say that nothing could be more appropriate in the treatment of endometritis, when the parenchyma of the uterus is involved to a degree of "hypertrophic engorgement," than the red iodide of mercury; yet I have not used it in such cases, because I consider it too violent in its action undiluted or modified, and I can think of no pulverizable agent with which it is not incompatible. In all those cases of corporeal endometritis which are attended by a purulent or muco-purulent flow from the os, as well as the cases which have a hæmorrhagic tendency, iodine or the iodides freely and frequently applied act more speedily in bringing about a favorable result than any other class of remedial agents which I have used in those troubles. But in those cases in which we see a glairy mucus, looking like the white of an uncooked egg, running from the os, and when little tenderness is manifested in passing the uterine sound, nothing has acted so well and with such gratifying results as the chlorate potash, rubbed to a fine powder and sprinkled freely over the membrane lining of the body of the womb.

We not infrequently meet with disappointment; visit our patient until we are ashamed to go any longer, and leave her very little improved by using too much sameness in our treatment. We select a remedy which we consider excellent as an application in cases of chronic endometritis, and treat every case of this form of trouble with it. Some get well speedily, some slowly, and others are very little, if at all, improved. If we would discard this habit of routine practice into which almost all practitioners are liable to fall, and select our remedies with an eye single to the character of the case in hand, we would be much better satisfied with the results of our practice.

If the treatment of "corporeal endometritis" by means of dry and powdered medicine applied locally to the lining membrane of the body of the womb, proves to be as efficacious, as I have reasons to hope that it will, through the agency of the little apparatus which I have presented, the disease in question will no longer be the "scare-crow" it has been to many physicians; and a large class of cases which we have been satisfied to relieve and comfort a little in the past, may, in the future, be altogether relieved and cured.

REPORT OF THE CHAIRMAN OF THE SECTION ON MEDICAL JURISPRUDENCE.

By J. D. ROBERTS, M.D., Goldsborough, N. C.

(Read before the North Carolina Medical Society, at New Bern,
May 21, 1886.)

Mr. President and Gentlemen of the North Carolina State Medical Society :

As this is the first report to this Society from the Section of Medical Jurisprudence, I have thought it better to lay before you some general thoughts on the question, together with facts in regard to the relation of the physician to our State laws, rather than give the advances made in this special department during the past year, as it is done with the other sections.

Medical jurisprudence, or its synonymous terms, forensic medicine and legal medicine, is a broad term and covers much ground. It can properly be made to include all and every occasion or circumstance where the doctor, in his professional capacity, comes in contact with the laws of the country. Recourse has been made to the physician for help in the interpretation and solution of phenomena in his special department since the dark ages ; and, as we come down through the course of time, we find him growing of more and more importance to the courts as civilization advances and chaos is reduced to order, until, within the past century, medical jurisprudence has assumed the position of a science.

Composed of two great professions, it rarely receives the amount of attention its importance merits, from the members of either, and it is for this reason that Dr. McDuffie, in his presidential address last year, urged the necessity of forming this new section in our State Society.

For want of time and space, in a paper of this character, I shall not attempt to cover, even partially, the ground occupied, and shall leave the whole matter of State medicine and public hygiene to the Board of Medical Examiners and State Board of Health, each of which has been doing such excellent work in its special department during the last few years.

Confining myself to forensic medicine in North Carolina, as I propose to do, to a great extent, the subject of malpractice suits, so much dreaded in some sections, can be dismissed with but a remark, as I do not find a single statute or Supreme Court decision bearing on the question. This I consider quite a compliment to the profession, as it shows that there is no need of such a law, or one would have been enacted.

The question of most interest to us as physicians, in relation to the law, is perhaps our prerogatives as witnesses on medical questions, and how such testimony is received. That the medical witness is placed at a disadvantage in the courts, no one acquainted with the facts will deny. He is out of his chosen element—is to testify of matters but little understood by the court and less by the jury, and, though reading and thinking in a technical manner, is expected to testify in a different vernacular. As little as our legal brother may understand what we say, it is always to the interest of one side to distort what is said, and to effect his purpose he will cross-question, badger and try in every way to confuse the witness. Knowing beforehand what it is he wishes to prove by the physician, or what facts he would like to suppress, he takes advantage of his position to shape his questions in such a manner as to gain his purpose, even at the expense of a seeming error on the part of the expert.

There is often a disposition to distrust the professional witness, especially the paid expert. Dr. Henry F. Cambell, in his address as president of the American Medical Association, 1885, relates an incident in the experience of a medical witness where this was exemplified, and where scientific investigation was ridiculed, as follows: "A woman was on trial for the murder of her husband by poisoning with arsenic, and a learned professor of chemistry and pharmacy in a medical college was the expert, who confirmed the other witnesses by finding arsenic in the stomach of the dead man. The defendant's attorney, an able lawyer, asked him a few questions, on cross-examination, all leading to this: 'Had he, as an analytical chemist, ever failed to find arsenic for the courts in suspected cases?' To which the doctor answered that it had so happened that his analysis had always established the fact of arsenic in cases where its existence had been circumstantially made out. In his argument to the jury the medical expert was alluded to as the arsenic-hunter

for his college, and a good one, too, since he always found it—that the credit of his college would suffer if he failed to find it, etc. The woman was not convicted.” An analogous case occurred in this State a few years since, and was related to me by a friend of the legal profession, who was thoroughly conversant with the facts: “A man was on trial for murder by poisoning with strychnia. He was seen to give the deceased, a half-witted creature, a drink into which he had just put a white substance from a bottle. Almost immediately he was attacked with convulsions, and soon died with all the symptoms of strychnia-poisoning. Prof. Redd, at that time by law the expert for analyzing suspected poisons, testified that he had found strychnia in the stomach of the boy, and showed in court the salts of strychnia in a vial, which he testified to having reduced from the contents of the stomach. The jury rendered a verdict of not guilty, and the most intelligent man on the jury told his fellows that, ‘when that chemist said he got that salt out of the dead man’s belly he believed he swore to a lie.’”

We here see how the results of scientific investigations are treated in our courts. I regret to say that the treatment received by the physician on the witness-stand is often caused, either by himself or his professional brother. If the doctor shows himself a partizan, if he uses his professional knowledge and position for selfish ends, or if he testifies simply because he was paid to give evidence that way, he cannot expect to command the respect due an honorable profession. The members of our profession, too, so often show such culpable ignorance on the stand! The mistakes, the ignorance, the fanaticism, the bombast, etc., of one of the profession reflects, to a certain extent, on the whole. It is the duty of every physician going upon the stand to so prepare himself, and show such perfect knowledge of the subject under consideration as to command the respect of all parties. Much often hangs upon the expert testimony. The life of a fellow-being is in jeopardy, the orphan’s inheritance is hazarded, the innocent are to be shielded from the oppressor, the guilty are to be punished for crimes, or the freedom of the party is involved. To labor against the popular prejudices of the day, to combat the errors and stem the tide of fanaticism, or to assail perverted opinion, is no easy task; but when duty calls and truth demands it, when our labors and investigations as scientists show us where the right and justice lie, there is no neutral ground

for us, nor should we hesitate at the clamors of those around us, but as true physicians hold the scales of scientific inquiry with an even hand, and show our labors to be impartial, let it strike where it will. By a straight-forward, honest course of this kind, we can do much to remove the blame that is now attached to experts.

One of the principal reasons of the distrust shown experts is that the legal man has not kept pace with his medical brother in the advances made in knowledge. Law is a science of dry facts, founded on precedent, and does not claim to be progressive. A question presents itself here as to how much responsibility rests on the courts for much of the poor medical testimony given. Under our laws any man writing himself M.D. after his name is entitled to the appellation of *expert* on any medical question, subject only to the discretion of the presiding judge, who is poorly qualified to pass on a question of which he knows almost nothing himself. Though the matter under consideration may be connected with some specialty, in the knowledge of which he is very deficient, he is called, and in many cases even forced, to testify.

Dr. Thomas J. Turner, Medical Director U. S. N., recently read a paper on medical evidence before the American Academy of Medicine in New York City, from a resumé of which I make the following extracts:

"The boundary line where ordinary testimony ends and expert testimony begins, is not always well defined. * * * "As regard opinions on medical questions, anyone at present may be permitted to testify, the question as to the special amount of knowledge being left to the jury to determine. It follows from this theory that there is no evidence which varies so immensely as so-called expert evidence. It has been decided that a medical opinion may be received as evidence, if it is based upon study without practice, or upon practice without study, and it has been ruled that it is not absolutely necessary that one should have studied or practiced medicine. * * * The test of the admissibility of opinion-evidence (which term Dr. T. prefers to expert testimony) seemed to the writer to be this: Has the expert witness any peculiar knowledge or experience upon the subject matter under inquiry of value to the court in determining the truth of the matters at issue? The degree of credence given to opinion-evidence should be founded upon the professional skill, the quickness of perception, the powers of discernment, the aptitude, the acquirements and

the education, as well as the experience and observation of the expert in the matters upon which his special expert knowledge arises."

Consider how many departments of the science of medicine are tasked for the purpose of elucidating questions before the courts. The chemist, with his crucible, reagents, tests, microscope, etc., the anatomist, the pathologist, surgeon, obstetrician, each department itself a specialty requiring all a man's time and talents for years to master—all these and many others have been and will be again needed to furnish knowledge in its special line for the use of the courts in arriving at the truth of matters before them. And yet our courts accept the testimony, and even demand it, of the young physician in any or all of these departments, though the ink on his diploma is hardly dry, or from the physician who has shown no aptitude or paid no particular attention to the specialty on which expert knowledge is desired. Before the courts the ignoramus, with his purchased diploma, the egotist, anxious to show himself or parade his learning, the miscreant, prostituting scientific knowledge by offering it to the highest bidder, and the painstaking, laborious searcher after truth, with his various accomplishments and years of study, are all classed alike as experts. Is it any wonder that the physician's testimony does not receive that credence which is due it?

Let our courts insist on having as experts those who are competent, by education, experience and observation to testify on the subject under inquiry, and better testimony, more reliable in every way, will be obtained, and the odium of the present state of medical testimony will be removed. Dr. H. C. Wood says he has "never personally known a serious divergence of opinion in medical jurisprudence which did not grow out of the ignorance or incompetency of one of the two sets of experts."

By insisting on the above rule, the humiliating spectacle of scientific men professing to gain their knowledge from the same course, swearing to different results, as is sometimes now seen in our courts, will be avoided.

An examination of the Supreme Court decisions of our State on the subject will show the principles governing expert testimony, some few of the more prominent ones of which I propose to discuss. Throughout the decisions we find the scientific attainments of the physician recognized, and while these decisions have not kept pace in all respects with the rapid strides made in medical progress, they show an appreciation of our labors far in advance of decisions in other States and countries.

As regards the *fees* of experts, Section 3,756 of the Code, last clause, reads as follows: "That experts, when compelled to attend and testify, shall be allowed such compensation and mileage as the court may, in its discretion, order." There is one Supreme Court decision on this question in which it is held that "one summoned as an expert in a criminal action is entitled to an extra compensation under the act of 1870-'71, chapter 139, section 133." (Code as above.) The fees being often quite a *desideratum*, especially when put to much expense in attending court, most writers on jurisprudence advise that this matter be arranged before going on the stand. So far as my experience goes the judges of this State are not parsimonious in allowing fees.

The physician's attainments are recognized in diseases other than the human family, one decision holding that his testimony is admissible in diseases of animals, "when he swears that he is enabled to form an opinion from his reading, observation, etc., of the disease in question, though he has not made diseases of stock a special study." How far the analogy between diseases of man and the lower animals extends, or how great the similarity, I will not stop to discuss. Under the above quoted decision it is left with the witness as to his willingness to swear to the diagnosis, and of his competency and the degree of credibility to be given his testimony, under any circumstances, is a question for the jury. In *State vs. Clark*, Chief Justice Ruffin rendering the decision, says that "the effect of the evidence is, of course, to be decided by the jury." In the same decision the following language is used in regard to expert testimony: "Authorities need not be adduced to show that it is an established rule in the law of evidence that, in matters of art and science, the opinions of experts are evidence touching questions in that particular art or science. The rule is founded in necessity, because persons of ordinary avocations, including jurors and judges, are not generally capable of judging correctly upon many questions which must be determined in order to guide the decision of a legal controversy, and which depend on scientific knowledge or skill in art. * * * At all events, when professors of the science swear they can thus distinguish, it would be taking too much on themselves for persons who, like judges, are not adepts, to say the witness cannot thus distinguish, and on that ground refuse to hear his opinion at all. By such a course the judge would undertake, of his own sufficiency, to determine how far a particular science not possessed

by him can carry human knowledge, and to determine it in opposition to professors of that science. That course would subvert the principle on which the rule of evidence is founded, and exclude the evidence in all cases, since in truth its utility depends on having the aid of men of science at that point at which it is necessary to supply the deficiency in the knowledge of those who are not experts."

Before pursuing the subject further, it might be well to define what the law means by an expert, and for this purpose I copy from Chief Justice Smith in *Flynt vs. Bodenhamer*: "An expert is defined by Worcester, following Burrill, as 'a person having skill, experience or peculiar knowledge on certain subjects or in certain professions'; and by Bouvier as 'one instructed by experience.' The court must decide whether the witness has had the necessary experience to enable him to testify as an expert. But the value of his opinion when, admissible, must be determined by the jury alone, and depends upon the opportunities he has had for acquiring skill and knowledge, and the use he has made of those opportunities. * * * But the opinion of a well instructed and experienced medical man upon a matter within the scope of his profession and based on personal knowledge, is, and ought to be, carefully considered and weighed by the jury in rendering their verdict."

In the syllabus of this case it is held that a physician of thirty years practice is an expert. The first impression received here is that this is true. Certainly thirty years study and observation of any subject should qualify a man to speak with authority on matters connected with such subject. Yet the principal element or factor in forming the expert is lost sight of. Thirty years in the practice of medicine does not, and will not of itself, make an expert in insanity trials. From the very nature of the case it is possible to reduce his qualifications to a term of years. His opportunities for observation, aptitude for learning, powers of discernment, etc., must all be considered in summing up what it takes to make an expert.

Hearsay evidence is not admissible under any circumstances, and opinions based on the truthfulness of another witness' testimony is not allowed as expert evidence. The opinions must be founded either upon facts within the personal knowledge or observation of the report, or upon the supposition or hypothesis that the jury will accept the testimony of witnesses as to facts as true.

It is this principle of law that requires the use of hypothetical

questions. As much as this form of examination is abused, and as many objections as there are to it, it must still be used for the want of something better. Chief Justice Smith, commenting on expert evidence, says: "The opinion of those who are skilled in any department of art or science resting upon undisputed facts and within the scope of their special calling, are not only competent to be heard by the jury, but often greatly assist in the formation of a correct judgment upon matters they are called on to investigate. The superior knowledge of the expert is frequently required in the conduct of judicial examination of subjects beyond the reach of common observation. But this evidence has its restrictions, and must never be allowed to invade the rightful and exclusive province of the jury in drawing their own conclusions from the testimony, of the credibility of which they alone must judge. It is their duty to hear and pass upon the evidence, and the expert's opinion is admitted only to aid in performing that duty." In this connection the rule for the examination of experts as to the proper form is laid down, and is hypothetical, before alluded to, the general form of which is as follows: If the jury find certain facts deposed to by witnesses to be true, what is the expert's opinion of those facts? Many decisions sustaining this form of examination from other States are cited and approved.

In the department of psychology the law is farther behind medicine than in perhaps any other specialty of the profession. It has long been considered a difficult, if not almost impossible, matter to harmonize the two professions on the subject of insanity. Ordinarily the opinion of the physician on subjects connected with his profession is accepted by the courts, but on the subject of insanity acknowledged as one of the most difficult branches of medicine, requiring for its study a high order of intelligence and intellect and long years of close application, anyone is allowed to testify, and the opinion is accepted, though the witness may have never seen a case of insanity.

In insanity trials our courts have certainly made haste slowly. No one deprecates the wrong done to law and order, to society and to our own profession by the "insanity dodge" more than I. That it has worked injury in some States cannot be denied, and I would not advocate the plea to the extent that it is carried by some psychologists.

The great difficulty is how to define insanity. The law attempts to make a cast-iron rule and require every case to fit it. Precedent has more weight than the facts in the case, and if the facts do not tally

with the musty decisions of by-gone days, they are not recognized as carrying any weight. The jurist and the physician look at the matter from two stand-points almost diametrically opposed to each other. Medicine is a progressive science, broad and catholic in its base. The law does not claim to be progressive, but is largely made up of precedents.

On this subject, Mr. Justice Doe, of New Hampshire, says : "When the authorities of the common law began to deal with the subject of insanity, they adopted the prevailing medical theories. * * * Without and conscious or material partition between law and fact, without a plain demarcation between a circumscribed province of the court and an independent province of the jury, the judges gave to juries on questions of insanity the best opinions which the times afforded. In this manner opinions purely medical and pathological in character, relating entirely to questions of fact, and full of error as medical experts now testify, passed into books of law and acquired the force of judicial decisions. Defective medical theories usurped the position of common law principles. The usurpation, when detected, should cease. The manifest imposture of an extinct medical theory, pretending to be legal authority, cannot appeal for support to our reason, or even to our sympathy."

Legal insanity in this State, in a charge by a superior court judge (Green), and endorsed and commended to the other judges by the Supreme Court, is thus defined : "That if the prisoner, at the time he committed the homicide, was in a state to comprehend his relations to other persons, the nature of the act and its criminal character, or, in other words, if he was conscious of doing wrong at the time he committed the homicide, he is responsible. But if, on the contrary, the prisoner was under the visitation of God, and could not distinguish between good and evil, and did not know what he did, he is not guilty of any offence against the law, for guilt arises from the mind and wicked will." Following precedent and the established order of things for generation after generation, because, perhaps, this way was good enough for our great-grand-fathers, it must be all right for us, our courts thus cling to the knowledge test for responsibility, after it has been shown, time and again, to be erroneous, by the advances of psychological medicines. This test has been variously modified according to the views of the different judges rendering decisions on the question, since the *'wild*

beast' test of Mr. Justice Tracy, in 1723, while still holding to the cast-iron rule of knowledge as the criterion of responsibility. It was affirmed in 1843 by the English judges, in answer to questions by the House of Lords, in these words: "* * * That before a plea of insanity should be allowed, undoubted evidence ought to be adduced that the accused was of *diseased mind*, and that at the time he committed the act he was not conscious of right or wrong." In 1868 Judge Brewster held that the true test was in the word power; had the accused the power of distinguishing between right and wrong, and the power to adhere to the right and avoid the wrong? Lord Brougham says if he knew what he was doing was contrary to law, that should be the test of his sanity, and Lord Lyndhurst uses these words: "The question was, did he know it was an offence against God and nature?" Chief Justice Tracy restricted the test to the particular act in question, and Parke modified it by the knowledge and character of the deed, and knowledge of doing wrong in so acting, and the whole position is condemned by Justice Ladd.

A short extract from Justice Doe's opinion in the case of *State vs. Pike*, already quoted from, is applicable here: "It is common practice for experts, under the oath of a witness, to inform the jury, in substance, that knoweldge is not the test, and for the judge, not under the oath of a witness, that knowledge is the test. And the situation is still more impressive when the judge is forced, by an impulse of humanity, as he often is, to substantially advise the jury to acquit the accused on the testimony of the experts, in violation of the test asserted by himself. * * * If tests of insanity are matters of fact, the judge should no longer testify without being sworn as a witness and showing himself qualified as an expert."

The jurist is disposed to look at this subject in a stern, matter of fact way, hard in all its bearings, regardless of human infirmities and frailties, while the physician is lenient, recognizing "the ills that flesh is heir to," and merciful to an unfortunate fellow-creature. It is charged against him that it is this feeling of tenderness and forbearance that prompts him to expose the cause of this class before the courts, but the loyal physician, ever faithful to the trust imposed upon him, will always follow the way of truth and justice, and it is justice for the insane, when scientific knowledge or inves-

tigations show him the truth of the insanity, that leads him to advocate his cause. The jurist is confessedly out of his domain in treating of the subject. He may be well suited to cope with the callous, hardened criminal, but what can he be expected to know of the delicate mechanism of the human brain or the influence of disease upon its physiological action? As physicians, we are willing to grant him all the authority or power desired in his own profession, but it is time to resent his interference in matters belonging exclusively to the medical profession. Time was, when the insane was considered as being possessed with a devil, that there was perhaps an excuse for bringing the acute faculties of his mind to bear on a question confessedly difficult to solve, but in the enlightenment of the nineteenth century, when insanity is universally recognized as a *disease*, there is no excuse for his interference, unless he will consent to keep pace with the advances in psychology in his decisions. Another quotation from Judge Doe shows that the fact is recognized by the judges, too: "The legal profession, in profound ignorance of mental disease, has assailed the superintendents of insane asylums, who knew all that was known on the subject, and to whom the world owes an incalculable debt, as visionary theorists and sentimental philosophers, attempting to overturn settled principles of law, when, as in fact, the legal profession was invading the province of medicine and attempting to instill old, exploded theories in the place of facts established in the progress of scientific knowledge. The invading party will escape from a false position, when it withdraws into its own territory, and the administration of justice will avoid discredit when the controversy is thus brought to an end."

This state of affairs is somewhat condoned in one Supreme Court decision in this State, where the judge uses the following language in rendering his decision: "This test (the knowledge of right and wrong) has long been resorted to as a general criterion for deciding upon legal accountability, and, with a restricted application to the act then about to be committed, is approved by the highest authorities. But we do not attempt to lay down any rule of universal application. It seems chimerical to attempt to do so, from the very nature of things, for insanity is a disease, and, as is the case with all other diseases, the fact of its existence is not established by a single symptom, but by a body of symptoms, no particular one of which is present in every case. Imperfect as the rule may be, it covers a great variety of cases, and may aid the tribunals of the country in judging of this most difficult subject."

(To be continued.)

SELECTED PAPERS.

INTRA-CRANIAL HEMORRHAGE.

Dr. H. F. Formad (*Philadelphia Medical Times*) sums up his study of one hundred and fifty-three consecutive cases of intra-cranial hemorrhage, in which autopsies were made, in the following remarks and comments:

Remarks and Comments.—A number of cases of intra-cranial hemorrhage which were encountered have been omitted from the series above detailed; as well as several cases of compound comminuted fracture, in which the skull, membranes and brain were partly pulpified into a mass, and hence the hemorrhage was not satisfactorily made out. I have also excluded chronic cases of cerebral hemorrhage, and those resulting in abscesses or in a fatal lepto-meningitis or cerebritis after the patients had partly recovered from the immediate effects of the hemorrhage. Nor have I incorporated into these records another large class of intra-cranial hemorrhage, viz: that of infantile meningeal hemorrhage. Of these I have seen many in coroner's work. Meningeal hemorrhage is common in infanticides and feticides, and even in still-born children. I can offer no plausible explanation of the frequency of meningeal hemorrhage observed in the still-born, otherwise than that they were presumably due to traumatic injuries from violence or to compression of the cranium during protracted labor or when forceps had been injudiciously applied. I have not met with cerebral hemorrhage in children other than meningeal.

Returning to my classification, I would state that the quantity of the hemorrhage or the size of the clot in any case of intra-cranial hemorrhage appeared, in all the cases observed, to depend upon the duration or the time that elapsed from the moment of injury to death. In cases where death ensued rapidly or instantaneously from shock, as happened in many fatal cases of concussion, or even in fractures of skull followed by immediate death (as by falls from a great height), the bulk of the ante-mortem hemorrhage (the blood-clot) was remarkably small; or clots were occasionally entirely absent, and only a post-mortem oozing of liquid blood could be observed. Where death

had been protracted for several hours, the blood-clot was usually large, weighing up to six or eight ounces, and causing death by compression of brain. In some cases of fracture of skull the hemorrhage is probably delayed for several hours or ensues but very gradually. Some patients are said to have walked around for many hours after the injury, and subsequently, when the blood oozed out in sufficient quantity to compress the brain, they fell, became unconscious, and died in coma. In one case of this nature I found a meningeal clot weighing eight ounces.

In the cases in which the intra-cranial hemorrhage was voluminous and death instantaneous, there was very little scalp-ecchymosis; whereas scalp-hemorrhage was more pronounced where the intra-cranial hemorrhage was small and death delayed.

Further, in no case where there was internal cerebral hemorrhage was there any meningeal hemorrhage when the cerebral vessels were normal; and in no case of traumatic meningeal hemorrhage did I see any coincident ventricular hemorrhage (except small ecchymoses) unless there existed some old lesion of the vessels or substance of the brain. It appears, however, that blood from the lateral ventricles may leak through the foramen of Monroe into the third ventricle, and thence by the aqueduct of Sylvius find its way into the fourth ventricle; but in none of the cases did I observe that a primary hemorrhage into the fourth ventricle ever extended to the lateral ventricles, probably on account of its rapidly fatal character.

A hemorrhage on the outside of an uninjured pia mater cannot reach the interior of the brain or the lateral ventricles.

The source of the hemorrhage is often very difficult to determine. In fracture of the skull the hemorrhage is often diploic; in concussion of the brain the hemorrhage has for its source the vessels of the pia mater; in diseased conditions of the brain or in atheroma of vessels the small feeding branches of the middle cerebral and of the basilar artery bleed most frequently, and the blood, breaking into the lateral ventricles, forms clots in either one or both of the ventricles.

The view expressed by Dr. J. A. Lidell, in his large treatise on apoplexy (New York, 1875, p. 113) that "meningeal hemorrhage not unfrequently occurs spontaneously, as well as in consequence of the operation of violent causes," and that (see page 120) "meningeal

hemorrhage of spontaneous origin is not a rare affection," is not unquestionably erroneous. Yet such "views" are quoted by writers on forensic medicine and presented to juries in murder as *facts*. Ignorant or ill-informed post-mortem examiners can set murderers free, or, on the other hand, they can create unnecessary court-trials.

Conclusions.—I. Hemorrhages exclusively above the pia mater and above the dura mater, i. e., on the outside of the brain, are always due to traumatism or to sunstroke, provided a cerebral source for hemorrhage is excluded, and the cerebral vessels and membranes were not diseased.

II. Hemorrhage in the floor of the fourth ventricle is always traumatic, provided there are no accompanying blood-clots in the lateral ventricles or any other part of the cerebral substance. If, however, the brain-substance is very *anæmic* (in the absence of a massive hemorrhage), then a ventricular ecchymosis may indicate that death ensued from epileptiform convulsions (idiopathic).

III. Hemorrhage exclusively below the pia mater or in any part of the brain-substance or into the ventricles (except the fourth) is always idiopathic, i. e., is due to disease.

IV. There must be a diseased condition of the cerebral vessels or substance in order to exclude violent causes and to ascribe a hemorrhage to disease. There must be traumatism (a fall or violence) in order to account for a hemorrhage in a normal brain.

V. The blood-clot in concussion of the brain is not found at the point of application of violence, but always somewhere about the opposite side of the brain, and always within the cavity of the arachnoid, i. e., between the pia and dura mater.

VI. The blood-clot in fracture of the skull is always found at the point of application of violence, immediately below, and always between, the dura mater and the fractured part of the skull itself. In rapidly fatal cases there may be a second, an intra-dural, clot in some other part of the brain, due to the effects of concussion.

VII. A blood-clot formed within the cranial vault is more favorable to the patient if due to fractured skull than if due to a mere concussion.

VIII. Only clotted blood and infiltration of blood-corpuscles into tissues indicate an ante-mortem hemorrhage; liquid blood is due to post-mortem oozing, and only stains, but does not infiltrate, tissues.

In cases, however, where rapid asphyxiation or certain poisons co-operate with the traumatic injury in causing speedy death, the blood may remain liquid and clots may fail to form.

IX. Severe bruises and cuts of the scalp may be seen in cases of idiopathic apoplexy, where a sudden cerebral hemorrhage causes a person to fall.

X. In some cases it is impossible to decide by medical examination alone as to whether a head-injury and the resulting hemorrhage is due to a fall or to violence.

XI. External marks of violence may be invisible to the unaided eye in some cases of injury of the head or other parts, but are easily detected and also distinguished from post-mortem spots by means of the microscope.

XII. The bulk of an intra-cranial hemorrhage stands usually in inverse proportion to that of the external scalp-hemorrhage; but it stands in direct proportion to the duration or the time that has elapsed from the moment of injury to death.—*Medical Times*.



SOME CAUSES OF THE GRAVER FORMS OF SYPHILIS.

By Professor FOURNIER.

(Translated from the *Journal de Médecine*, February.)



The question is constantly discussed why syphilis is sometimes benign and sometimes severe; but the belief that the character of the disease is decided by the nature and strength of the infective virus is now giving way to the theory that it is decided by the nature of the soil in which the poison is planted. This idea has gained ground since we have found, by a system of confronting the infected persons, that benign syphilis will often cause the malignant forms of the disease, and *vice versa*. Each individual has syphilis in accordance with his constitution, his organic defects and his exterior condition and surroundings. The classical writers sum up everything in those causes which weaken the constitution, and in bad hygiene. But these are not sufficient to account for the

facts; we want a more precise and complete determination of the factors which constitute the gravity of syphilis. They may be classed as follows: Conditions of age; tuberculous scrofula; alcoholism; malaria (which enters largely into the causes of the gravity of syphilis contracted in the colonies); hereditary or acquired predisposition, organic defects, predisposition to hereditary cerebral affections, mental over-pressure; and finally (assuredly one of the most important), an insufficiency of treatment at the commencement of the malady. There are other causes, such as gout, herpes, etc., but we will now confine ourselves to the three important elements: age, tuberculous scrofula and alcoholism.

As to age, syphilis is especially grave at the extremes—in early youth and in old age. We do not now refer to congenital, but to acquired syphilis. Thus vaccinal syphilis in children results almost always in very grave symptoms and is often mortal. Statistics relative to epidemics of this kind demonstrate the fact, and the prognosis in such cases bears no relation to that given in the cases of adults, even when the latter have suffered for six months or a year from acquired syphilis.

It is an ascertained fact that syphilis contracted after the age of fifty becomes more and more serious. Acquired after sixty, syphilis has a very grave prognosis and is characterized by four principal elements: the tendency to phagedæna; to profuse and generalized eruptions; to precocious tertiary symptoms (such as gummata and cerebral lesions), and finally, to a very marked reaction upon the general condition. There are loss of appetite and physical force, with a languor which verges upon prostration, this being soon followed by true cachexia.

Tuberculous scrofula has so pronounced an influence in syphilis that its evil results have remained incontestable. In scrofulous patients the syphilides have a tendency to take on humid forms; they are suppurative, ecchymatous, impetiginous or rupial. It is in such patients that we observe precocious malign syphilides with massive adenoid growths having multiple ganglia, and which may become fistulous. These growths may arise at the advent of the chancre and take the form of a syphilo-strumous bubo. Ocular symptoms are frequent in these cases; white pseudo-tumors are produced in the articulations; and, finally, it seems that scrofula induces syphilitic lesions in the mucous membranes of the larynx,

pharynx and nasal fossa. Thus cachexia is brought about rapidly, but the association of serofula with syphilis gives rise to singular hybrid types of disease whose symptoms recall the characteristic forms of both maladies. But syphilis is not only acted upon by serofula, it reacts upon tuberculosis. It is certain, for instance, that hereditary syphilis predisposes to lupus. It is equally certain that in persons predisposed to tuberculosis, syphilis provokes the development of this malady just as might be the case where the individual suffers from great anxiety, fatigue or poverty.

Alcoholism has a very marked, though not unvarying influence upon the gravity of syphilis, and it acts in four ways. In the first place, it predisposes the patient to the grave and precocious forms of the disease. Under such circumstances the syphilides take on an ulcerous character very quickly. Alcoholism also influences badly all the skin diseases of syphilis, and we often find these effects so clearly marked that we are able to diagnose alcoholism by the simple aspect of a syphilitic skin-lesion. Alcoholism also favors those subintrant forms in which the syphilitic symptoms or manifestations succeed each other almost uninterruptedly. It also determines those forms of syphilis which react upon the general health and cause cachexia. Finally, alcoholism predisposes its subjects to brain syphilis. It figures largely in the antecedents of the syphilitic insane, and in these subjects it may be said to shoot to the brain in like manner as it sprouts upon the skin.—*New York Medical Abstract.*

CALOMEL AS A DIURETIC.

JANDRASSIK (E.) "Calomel as a diuretic."—*Deut. Arch. f. klin. Med.* Bd. XXXVIII., p. 499, 1886.

Some of the older medical authors attributed to calomel, in certain combinations at least, a diuretic influence, but in recent books the beneficial effects sometimes arising from its use in dropsy are looked upon as due to its effect as a purgative. The improvement which followed the administration of calomel in a case of heart

disease with anasarca, in which syphilis was suspected, led Jandrassik to try it in a series of cases of dropsy, and from the results which he records at length in the *Deutsches Archiv* he has arrived at the conclusion that calomel in cardiac disease is a powerful diuretic if anasarca be present. In six out of seven of such cases he obtained distinct evidence of its potency.

Jandrassik gives calomel in doses of three to four grains combined with an equal quantity of jalap, and repeats the dose two to four times daily. It is difficult to understand his object in giving jalap, for he maintains that purgation hinders the diuretic effect of calomel, and that the mercury salt alone promotes diuresis, for it is effective by itself, whilst jalap uncombined does not influence kidney secretion. Diuresis commences, he says, suddenly on the second, third, or sometimes on the fourth day after the administration of the drug is commenced. Sometimes the urine discharge is enormous. In one case 330 ounces were passed in twenty-four hours; frequently from 100 to 150 ounces. In fact, he claims that calomel has a far more powerful influence on the secretion of urine than digitalis. The diuresis reaches its maximum in a few days, and then the quantity of urine passed gradually decreases, till in about a week or two it becomes normal. The amount and duration of the polyuria depends on the extent of the watery effusion. The influence of the calomel is perceived as soon as symptoms of the absorption of the drug (metallic taste in the mouth, salivation or stomatitis) appear. If purgation be produced, the effect of the drug is diminished or lost, and should it occur, an opiate is called for. It is not always necessary to continue the drug till diuresis sets in. As a rule it is better to give it for two days only, and await results.

Diuresis is best prolonged, after it has set in, by continuing the administration of calomel. Usually the dropsy is removed entirely by the increase in the urinary discharge, but if a little remain, or if it return, some days must be allowed to elapse before the calomel is repeated. It is possible to get a powerful effect time after time when the dropsy keeps returning, owing to the continuance of its cause. The specific gravity of the urine decreases with the polyuria, and the chlorides diminish.

Jandrassik does not find that calomel causes diuresis in healthy people. In a case of Bright's disease it failed to have any effect, and it was given without avail to a man with pleuritic effusion.

In the one instance of cardiac disease in which it was ineffectual, there was very little dropsy. Arterial tension is not increased by the administration of calomel, and in some of the cases digitalis was called for, owing to the weak action of the heart during the calomel polyuria.—*Medical Chronicle*.

THE PROPER RELATION OF VERSION AND EXTRACTION IN POINT OF TIME.

It has been held by some authors that after version from either transverse or cephalic presentations it is better to wait for a time before proceeding to the manual extraction. Or, in other words, that in cases in which malpresentations require correction, it is better to do pelvic version (externally or bimanually) before the os fully dilated, and then wait for full dilation before proceeding to the extraction, if such interference is necessary. With a view to demonstrating the inadvisability of this separation of the two operations in point of time, Winter has analyzed the material of the Royal University Clinic in Berlin from 1876 to 1884, and collected 310 cases of simple, uncomplicated transverse positions of full-term living children: from the examination of this material he has come to the following conclusions:

1. The teaching, that version and extraction should not be performed in immediate succession, arose from the false supposition that the footling case produced artificially by version has the same prognosis as the same presentation occurring naturally.

2. The earlier and generally adopted practice of performing version as soon as possible after the escape of the liquor amnii rests on the fear of the intra-uterine death of the fœtus, and especially of the increased difficulty of version after longer waiting.

3. Fœtal death does not occur alone from the premature escape of the liquor amnii, but only when tympanites uteri, unduly powerful pains, or tonic uterine contraction complicate the case.

4. Version cannot be rendered difficult by waiting until the dilatation of the os, for the dangerous thinning of the lower uterine segment does not occur until the expulsive stage; nor again, does

the ordinary clonic uterine contraction cause trouble in turning. Tonic uterine contraction, however produced, is a pathological condition, which is always to be avoided.

5. In normal cases children bear version and immediate extraction with safety.

6. Waiting after version before proceeding to extraction is very dangerous for the child, which often dies in utero, or is saved only by speedy extraction.

7. The causes of foetal death are injuries to the cord during the version, separation of the placenta, and entrance of air into the uterus.

8. Whether the membranes are ruptured or unruptured, version should not be performed until the extraction can be immediately proceeded with.

9. Only a definite indication, such as placenta prævia, prolapse of the cord, beginning infection, imminent asphyxia of the child, great thinning of the lower uterine segment, pure inertia uteri, demands early version, that is, before the dilatation of the cervix, and then for the most part in the interest of the mother.—*Boston Medical and Surgical Journal*.

TREATMENT OF STAMMERING.

In the *Bulletin de l'Academie Royale de Medicine de Belgique* for January, 1886, Dr. Chervin, of Paris, has an interesting article on the etiology and treatment of stammering. His treatment lasts only three weeks.

The *first week* is devoted to the study of the elements of speech, and to the methodic exercise of respiration. The respiratory rhythm must be established at the outset, and the patient must be taught to breathe and utilize his breath with a view to speaking. There are certain exercises of respiration, in which he teaches the subject how to inspire and how to expire, these acts being preceded by a moment of repose, during which the mouth is kept closed. Expiration is at first utilized in pronouncing the separate sounds, then combined sounds. The vowels are first chosen in the exercises, as

they are easier to pronounce than the consonants. These latter are taken up and each carefully studied. When the elements of speech have been perfectly studied, and the difficulties arising in connection with individual consonants have been overcome by special gymnastic exercises, the subject passes to the study of syllables, then words, and, finally sentences and paragraphs. During the first week the stammerer should abruptly break with his old manner of speaking. Dr. Chervin considers as a powerful aid in this work complete, absolute silence, which he imposes upon his patients during the first week. It is evident that as long as the principles of the method are not sufficiently known to the pupil, and he is not completely broken into their practice, he will not apply them in conversation. This rigorous silence has another effect. It quiets the pupil's mind, and makes him forget all about his stammering.

The *second week* the pupil regains freedom to speak. The time has arrived for him to apply the principles he has learned. Henceforward he can speak, because he no longer stammers; he restrains himself, and slowly puts into practice the instructions concerning respiration, the regular movements of the tongue and lips, etc.

It is always a surprise to Chervin to see the contortions, the spasms, the hesitations, the most marked repetitions, disappear under this method as if by enchantment. A clear, precise utterance succeeds the former stuttering; speaking will become natural, agreeable and harmonious, when the extreme methodic slowness imposed during the second week will have given way to an easier gait which is to be practised during the last week of the treatment.

The *third week* is employed in fixing the new habit of speaking with care and method, and in relieving the delivery of all tendency to choking. At the same time a careful study is made of the inflections of the voice.

In fine, Chervin replaces the very marked syllabation of the first days by a steady but slightly accentuated delivery, in which all the syllables are pronounced without precipitation, and, above all, without jerking.

During this last week, Chervin counsels his pupils to imitate persons who speak well; whose delivery, without being of pedantic slowness, is calm and deliberate; in whose voice the inflections are natural and varied; whose sentences, well modelled, both as to breathing and meaning, are easy to understand and pleasant to hear.

But at the expiration of the three weeks it must not be supposed that the pupil is entirely cured; he is like a convalescent, who has still need of care and precautions in order to achieve a complete restoration. Special instructions must be given to him, whereby he may be able to continue the application of the method, and thus indelibly fix the habit of speaking properly.—*New Orleans Medical and Surgical Journal—Medical News.*

THE TREATMENT OF DIVIDED TENDONS.

For the treatment of tendons ruptured subcutaneously, the majority of the text-books on surgery recommend simple attempts at approximation of the separated ends by position, and, in the case of an open wound, suturing the separated ends. The former method has been very often adopted, with moderate success, and the latter has been used often enough, and successfully enough, to make it a well-established plan of procedure. In 1882, however, Heuck reported, in the *Centralblatt für Chirurgie*, a plan adopted with success by Czerny, which may be regarded as an improvement upon the methods just mentioned. In this case, Czerny, finding it impossible to bring together the ends of a subcutaneously ruptured extensor of the thumb, two weeks after the accident, did a sort of flap operation, which resulted in restoration of the power of extension of the thumb. Whether this was effected by direct union of the divided ends of the tendon, or by means of their union to the cicatrix in the skin, it is not easy to say.

Still another method of overcoming the difficulty presented by wide separation of the ends of a divided or ruptured tendon is what the French have called "union by anastomosis." This consists in grafting the peripheral end of the injured tendon to the continuity of a neighboring sound tendon. The operation has been done only a few times; but it has proved so successful as to merit attention. The first account of its performance is somewhat apocryphal. Velpeau is said by Tillaux to have mentioned two such operations done by Missa and Champion. The earliest authentic case is said by Denonvilliers, in the *Bull. et Mém. de l'Acad. de Chirurgie*, for 1875, to have been done in 1873, by Polaillon, who sutured the peripheral ends of the divided

extensor tendons of the three middle fingers to the corresponding tendons of the thumb and little finger. In 1875, Tillaux reported to the Academie de Chirurgie a successful operation, done in 1874, in which, two months after the division by laceration of the extensor tendons of the little and ring fingers, he cut down upon them and sutured their peripheral ends to the extensor tendon of the middle finger. In 1876, Duplay reported to the same society a case in which he had successfully united the subcutaneously ruptured tendon of the long extensor of the thumb to the tendon of the extensor carpi radialis longior, by inserting the peripheral end of the former into a button-hole made in the latter, and fixing it there with a single wire suture. At the same time Tillaux reported that he had just done an exactly similar operation.

The most recent writer on this subject is Hager, who, in the *Berliner klin. Wochenschrift*, for May 31, 1886, describes an operation for the relief of what he calls, after Volkmann, a spontaneous rupture of the tendon of the long extensor of the thumb. The operation was done in 1885, and consisted in cutting down upon the tendon seventeen days after the rupture occurred, and attempting to find the divided ends. Failing to discover the upper end, because of its retraction, he cut the lower end off obliquely, and sutured it with catgut to the tendon of the extensor indicis, after having opened the sheath of the latter and freshened a suitable surface by scraping off the epithelium. Under antiseptic treatment the wound healed by first intention, and in two months the power of extending the thumb was almost restored, while in six months the movements of the hand were nearly normal, the thumb moving freely, even when the fingers were flexed into the palm so as to make a fist.

This admirable result confirms the previous experiences which we have mentioned, and encourages the hope that in this method we have a means of repairing an otherwise hopeless injury. — *Medical News*.


PERITYPHLITIS IN TYPHOID FEVER.—Prof. Da Costa had, at the Pennsylvania Hospital, a rare sequel of typhoid fever—*perityphlitis*. He directed that it be treated with poultices, opium, quinine and supporting measures; the aspirator to be used if any evidence of pus appeared.—*Cal. and Clin. Record*.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

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ANALYSIS OF ONE HUNDRED AND NINETY-FIVE EXAMINATIONS MADE BY THE NORTH CAROLINA BOARD OF EXAMINERS FOR THREE SESSIONS IN 1885-1886.

We give below a tabulated statement of the result of examinations made by the Board of Examiners. It shows a very large amount of work done, and done faithfully and conscientiously. Some of the examiners, if not all, devote an average of fourteen hours out of the twenty-four during the four days sessions, in order to give all the candidates an opportunity to have a thorough examination, and prevent their detention and consequent expenses. That there should be some friction in the new machinery, and that there should be some impatience on the part of a few of the candidates who are kept waiting, with their nerves under tension for

many days, is not strange, nor is this feeling any less apt to occur on the part of the examiners, who, as we have stated, work fourteen hours of the twenty-four. It is pleasant to remark that the loyalty of the candidates shows how deeply imbued the entire profession of the State is with the justice of the law; from such material the future prosperity of the profession is assured, and in due time the beneficial effects of this great work will be seen and acknowledged by all true physicians.

Comments are unnecessary upon the work done by the colleges—an examination of the tables will enable those interested to make their own deductions:

LICENSED.

COLLEGE.	Graduates	Non-Graduates	One Course.	Total.
Jefferson College, Phila.....	11	.....	5	16
Physicians and Surgeons, Balt.....	49	1	3	53
Louisville Medical College.....	10	.....	1 (a)	11
Baltimore Medical College.....	2	.....	1	3
University of Maryland.....	28	.....	1	29
Bellevue Medical College.....	8	1	.....	9
University of Virginia.....	3	2 (b)	2	5
University of Pennsylvania.....	4	.....	.....	6
L. I. Medical College.....	2	.....	.....	2
Kentucky School of Medicine.....	4	.....	.....	4
Leonard Medical School.....	3	.....	.....	3
University of New York.....	4	.....	2 (c)	6
Vanderbilt University.....	1	.....	.....	1
Southern Medical College.....	1	.....	.....	1
Atlanta Medical College.....	1	.....	1	2
Medical College, Va.....	2	1	1	4
South Carolina Medical College.....	5	.....	1	6
Woman's Medical College.....	1	.....	.....	1
Physicians & Surgeons, N. Y.....	1	.....	.....	1
University of Ia.....	1	.....	.....	1
Nashville Medical College.....	.....	.....	1	1
(Non-Graduates, no College).....	.....	1	.....	1
Total.....	141	6	19	166

(a) Louisville Medical College and Atlanta Medical College.

(b) University Va. and Bellevue Medical College; University Va. and University of Maryland.

(c) University of N. Y. and Physicians and Surgeons, Balt.; University of N. Y.

REJECTED.

COLLEGE.	Graduates	Non-Graduates	One Course.	Two Courses.	Total.
Jefferson College, Phila.....	.....	2	.....	.....	2
Physicians & Sur., Balt.....	6	4	4	1	15
Louisville Medical College.....	2	.....	.....	.....	2
Bellevue, N. Y.....	.....	1	.....	.....	1
University N. Y.....	.....	.....	.....	1	1
“ Md.....	2	.....	.....	.....	2
“ Louisville.....	1	.....	.....	.....	1
“ S. C.....	.....	.....	1	.....	1
“ Va.....	.....	.....	1	.....	1
Atlanta Medical College.....	1	.....	.....	.....	1
No School.....	.....	2	.....	.....	2
Total.....	12	9	6	2	29

INFLUENCE OF THE SOIL ON THE PRODUCTION OF
PATHOGENIC FUNGI.

Some preliminary investigations have been made recently by Soyka (*Fortschritte der Medicin*, May 1, 1886, *Medical Chronicle*, July, 1886) on the relations which exist between the temperature and moisture of the ground on the life-history of a well-known fungus, the bacillus of splenic fever. The question of the infectiousness of the so-called pathogenic fungi is intimately bound up with the origin of the permanent forms. There is a vegetative form, which is very sensitive to external influence, easily perishes and is easily overgrown, and a permanent form, which resists extremely external agencies, and is hitherto known in the shape of spores. It is probably by this medication that infectious disease is carried, a modification which these organisms do not generally assume in the living body. Now, two factors have a special influence in spore formation, viz: the presence of oxygen and severe conditions of life, factors which will come into play in the soil. Convinced of the influence of the soil on spore formation, he selected the bacillus of splenic fever, as its botany was best known. The soil chosen was of quartz sand, chemically indifferent. Fresh anthrax fungi, care being taken to exclude spores, were introduced into the artificial soil, and moistened with the medium in which the fungi were cultivated, viz. a weak alkaline meat solution, to which was added one per cent. peptone and half per cent. of common salt. He determined that fluids containing anthrax matter, such as proceed from diseased animals and from carcasses will, in the ground, produce spores over the greater part of the year. We have not gone into the details of this experiment, as it is only preliminary, and is to be supplemented by completer observations, but it is a valuable point gained in following the life-history of a known bacillus into the soil, there to study its behavior, and finally to determine the conditions which more readily favor its growth, to follow its change of forms so as to unravel them, then to learn to apply this knowledge to the prevention of disease. So intricate is the polymorphism of most microscopic fungi, that it may be hoping too much to believe that, having thoroughly mastered one in its relation to its terrestrial and its animal parasitic life, we will have a knowledge of others; but we can say with confidence that the one having been achieved, we will be all the better prepared to learn the way of investigating others. We look forward to these completer studies with interest.

REVIEWS AND BOOK NOTICES.

INSANITY AND ITS TREATMENT. By G. FIELDING BLANDFORD, M.D., Oxon. Third Edition. Together with Types of Insanity, by ALLAN McLANE HAMILTON, M.D. Wm. Wood & Co., New York.

This work and that of Dr. Eichharst on Practice of Medicine, constitute the February and March numbers of Wm. Wood & Co's Standard Library. The work of Dr. Blandford was originally written in lectures for his class at the school of St. George's Hospital, but as it has reappeared in successive editions it has grown out of its first form into a full-fledged text-book. However, enough of its early character has been retained to make it a book for the student and general practitioner, as well as for the specialist in mental disease. The style is clear and pleasant, and we are sure the book will be read with profit. Dr. Hamilton's additions to the book consists in a short appendix, noting the marked changes in the appearance of the insane and in the change of bodily function. He has added eight plates as illustrative pictures of types of insanity, viz: idiocy, imbecility, melancholia, with delusions and chronic melancholia, subacute and chronic mania, dementia and general paresis.

DISEASES OF THE STOMACH. A Manual of Clinical Therapeutics. By Prof. DUJARDIN-BEAUMETZ. Translated by E. P. HURD, M.D. Wm. Wood & Co., New York.

When we come across a work like the present the reflection promptly arises that the world—not the literary world only—owes nearly as much to the skilful, conscientious translator as to the original author. For what a sorry appearance does not a bad translation, of even the most meritorious composition make—how much its symmetry is marred, how much truth beclouded, how many sterling beauties miserably lost! On the other hand, the good rendering of a foreign author gives a complete repetition of the pleasures of the native edition, with the additional satisfaction due to the examination of delicate, and often difficult work, ably performed, with the view to the extension of its usefulness.

The work under review is an admirable translation of the first volume of a series of three, under the title of *Leçons de Clinique*

Thérapeutique, by a confrère whose writings are well known for their scholarly and scientific character. The profession and the public were already indebted to Dr. Hurd for several translations of an equally valuable character of medical works from *La Belle France*, and also for many important contributions to the medical journals of this country. The preface to the "Diseases of the Stomach" is both instructive and well written, giving an able, lucid explanation of the aim and scope of the author, which must materially help to the proper understanding of the book. Dr. Dujardin-Beaumetz is fortunate in having found a translator so well versed, also, in the French idiom.

This volume, in the words of the translator, is "an epitome of the useful labors of his (Dujardin-Beaumetz's) contemporaries, as well as his own valuable contributions to the healing art." He further pertinently says: "* * * What is really known about many a disease would fill a large volume, while what is known about the treatment may be comprised in a few pages. The busy practitioner, doubtless, needs the large volume, but he needs especially the chapter on therapeutics; and the volume that gives him a handy resumé of the results of a wide experience in the best methods of treating disease, will be the book which will be of the most practical value to him." Could the case be put more plainly, more effectively before the reader? It fully illustrates the scope and object of our French confrère. Throughout this work the important data are "set forth in strong light and grouped in a few masterly generalizations," which indicate to the practitioner "where his intervention is necessary, as well as the limits of that intervention."

While throughout the book valuable hints on the symptomatology and pathology of disease are given, the author's aim has been more to prevent a system of proper treatment, dietetic, hygienic and remedial, especially the two former, the last receiving, also, ample attention for all purposes. The author fully appreciates the importance of those two agents in the improvement of health and prolongation of life, having the endorsement of the examples of men like Sir Henry Thompson and Dr. J. Milner Fothergill, who are devoting so much time to the subject of constructive dietetics, and whose researches, especially the latter's, have been the means of dispelling the false theories which originated with Liebig, and were generally accepted by the profession, to the great detriment of thousands of invalids.

Dr. Hurd shows excellent judgment in his abridgements and con-

densations, many of his addendas being invaluable. Like Dr. Dujardin-Beaumetz, however, he regrets he has placed his notes at the end of each chapter, instead of at the bottom of the page, it being less easy to refer to them there. Some of these notes are of the greatest value, evincing an erudition and research far from common.

With regard to Dr. Dujardin-Beaumetz, the reflection suggested by his book is, that it is greatly to his credit to find him *au courant* with the most advanced medical science and literature of the day, foreign as well as French, rapid as have been their strides these many years past; and this is not inconsistent with his omission of a notice of certain remedial measures in vogue with us, both in America and England. He certainly shows fine discrimination in sifting the wheat from the chaff, being evidently desirous of presenting the reader with means and remedies which he himself knows to be useful. This, whether always perfectly right or not, has evidently been his leading aim. We find also with him a remarkable skill in assimilating and adapting to his use the suggestions of other professional men, thereby making them serviceable in the best sense. An indefatigable worker, painstaking in his researches no less than in his methods of procedure, no wonder he has produced important results in experiments with food, medicines and regimens, the study of which deserves the best attention.

Dr. Hurd certainly deserves high praise for his faithful, his sympathetic translation, in which the author's thoughts and language are accurately reflected, yet I must express my own individual taste as preferring the omission of such words as *vegetal* for vegetable, *empoisonment* for poisoning, and other words and phrases wholly French, or more French than English, especially when the doctor's mastery of the two languages and extensive practice in the use of idiomatic English so well enables him to avoid even the slightest fault of style. The familiarity with a foreign language and the desire to be as close and faithful as possible to the thoughts and expressions of an author in it, do incline a translator to an occasional error of this kind.

It might be too much to expect in the compass of one volume all the medicines usually prescribed in a certain class of cases; but the most important should be set down, according to the manner of all good summaries. For instance, in the treatment of constipation, Ling's kneading of the bowels is wanting, and, in sea-sickness, nitrite of amyl and the bromide of soda, which are very important,

are forgotten ; also *hydrastis canadensis* and arsenic in cancer of the stomach, which, according to some authorities, have even effected cures ; and in progressive pernicious anæmia, static electricity and nitro-muriated acid. Among the means of superalimentation the zymized suppositories and desiccated oxen blood are omitted. But it would be ungenerous to scrutinize for shortcomings, or dwell upon them, when we have in a modest space so much that is both interesting and instructive— a work that must prove a valuable help to the practitioner, while well-fitted to serve as a text-book, owing to its clearness, excellent condensation and the symmetrical arrangement of its material.—*Prosper Bender, M.D., Boston.*

CURRENT LITERATURE.

RATIONAL METHOD OF TREATING CATARACT PATIENTS TO THE EXCLUSION OF COMPRESSES, BANDAGES AND DARK ROOMS.

Since the 11th day of May sixteen cataract-extractions have been performed at the Presbyterian Eye and Ear Charity Hospital, on patients in public wards and in private rooms. With all of these the new method was adopted. The sole dressings to the eyes were pieces of diaphanous isinglass silk plaster, large enough to extend from brow to cheek, and from one canthus to the other. These pieces were soaked in water, and then thoroughly adjusted to the lid surfaces. This one dressing usually suffices for the entire treatment. If the straps become detached at the edges, as they did in some instances, they were replaced by fresh ones.

These patients were all operated upon in the operating-room on the second floor of the hospital, and all under the anæsthetic influence of cocaine.

They walked to their rooms immediately after the operation, ascending to the third and fourth stories.

When put to bed, the only instruction to them was to leave the eye undisturbed.

No restrictions were put on their movements, nor as to diet.

One patient was found walking about on the second day. Several got out of bed on the third.

At no time were the rooms so dark that reading by others could not be enjoyed.

No water dressings were used.

The straps were finally removed on the fifth or sixth day.

All the patients bore the ordinary room-light without photophobia or lachrymation, and without the protection of smoked glasses.

By the seventh or eighth days patients were able to move about the house with eyes unprotected and with a degree of comfort unknown during the previous eight years' existence of the hospital, and to the 582 patients from whom cataracts have been extracted up to the 11th of May, 1886.

The revolution in the after-treatment of cataract and iridectomy patients in this hospital is complete. From this time hence all bandages, compresses and dark rooms will be among the things of the past, to be remembered only by the discomforts which they occasioned.

From my month's experience I am forced to the conviction that the hyperæmia, photophobia, lachrymation and painful weakness of eyes after cataract-extraction, are largely, if not altogether, due to the methods of eye dressing in universal use, and are, therefore, induced by the treatment, and not by the disease.

A patient applies for treatment with matured cataracts. He stands light perfectly well up to the moment of operation. While lying on the operating-table, with cataract extracted, with pupil doubly enlarged by the iridectomy, and with the strongest light in the face, he suffers no inconvenience and makes no complaint of its harshness. When the lids are closed the amount of light straying through them into the eyes is about the same as that to which he was accustomed before the cataract was extracted. Which is the more reasonable mode of treatment—leave him in this natural condition, or at once plunge him into utter darkness by covering the eyes with bandages and compresses, and by putting him in a room so dark that even his attendants cannot see to get about? When he emerges from this confinement, at the end of eight or ten days, by the removal of the bandages, is it surprising that the eyes should weep, and that light should be painfully offensive? Try your good

eyes without operation with the bandages, and see if they will not behave in a similar manner.

Then, again, as to bandaging. We do it believing that the incised corneal wound requires support, which it undoubtedly does; but do we fulfil the indications by the methods we adopt? Heretofore I have thought so when I applied over each eye a square piece of soft, wetted cloth, then a ball of raw elastic cotton, which the supporting bandages would press equally on all parts of the wounded eyeball. Grant that this was all secured, and that the proper support was obtained when the patient leaves the operating-room, what is the condition when he gets into bed? His movements upon the pillow draw, necessarily, the bandage, unequally toward the side pressed by the head. No bandages, however elastic and however nicely adjusted, can keep up at all times, in the varied positions, of the head, equable pressure on any one surface.

The comfort to the patient is immense. The comfort to the attendant incalculable. There is no longer the dreaded darkness to the patient, nor the gloomy room to the attendant. We hear of no more stumbling over furniture nor complaints from friends that their eyes have been made weak by the confinement. Then when the straps are removed and the eyes are opened, the surgeon sees for himself the good, strong eye, instead of hearing from the darkness the complaint of the patient that tears are streaming down his face from the little light which his over-bandaged eyes cannot now stand. From this point convalescence is rapid. In a very few days patients are ready for dismissal, and that without having used any protection spectacles. Still I advise patients on leaving the hospital to use smoked glasses for the sunny street.

I have already had some to discard this advice as unnecessary. Two patients came for inspection to my office, four days after their dismissal from hospital, and two weeks after the cataract-extraction operation, walking through the bright streets without any protection whatever.

Of the sixteen cases of cataract-extraction treated by this new method, three of whom being very recently operated on, are still with closed eyes under the adhesive straps, I have had the most gratifying results. Most of them have been brilliant illustrations of the efficacy of this simple treatment. In no case have I had the weeping eyes of a former experience, all of them standing the light

well the day the adhesive strap was removed. It is a revolution complete in eye dressings, and experience has proved it to be a wise and very beneficial change, which must meet with universal acceptance, even if it does break up one of our long and most confirmed habits.

With cocaine as the local anæsthetic, and adhesive straps as the eye dressing, with light rooms in which friends can read for the entertainment of those operated upon, cataract patients will in the future have little to dread from pain or confinement.—*J. J. Chisolm, M.D., in Am. Jour. Ophth.—Medical Analectic.*

[Recent communications show that in New York and Philadelphia hospitals Dr, Agnew and Dr. Lewis, for several years, have adopted the above plan.—Eds.]

WHAT THINK YOU OF IT?

On my return home from New Bern, where the State Medical Society and Board of Medical Examiners met, I fell in with Dr. W. Strudwick, of Hillsboro, who told me that before the late war between the States, when slaves were owned by most of the planters, there was a favorite negro who got hurt in some way, and afterwards got his feet and legs wet, which resulted in a case of traumatic tetanus. His father, who was a physician, and himself, were called to see the man. His father had an ounce of quinine wrapped up in a blue paper. He measured out ten grains and gave the negro, and then measured ten more as a simple dose, instructing the lady—his mistress—to give him that quantity every hour until they returned. The lady was taken very sick, and when the time came for the negro to have the medicine she told her husband to go in and give it, that it was in a blue paper. He overlooked the small paper and gave the negro what was in the large one—260 grains, at one dose. When the doctors returned the next morning, they found him resting well, and very wet with sweat, and to their astonishment all symptoms of tetanus were gone. His recovery was rapid, and there were no bad effects following the unreasonably large dose of quinine.

Since that time, he said, he had treated two other cases of traumatic tetanus with success, giving each *one hundred grains* at a

dose, repeating every hour until the symptoms gave way. He stated that he had never had any bad symptoms to follow the administration of this quantity in a case of traumatic tetanus.

I asked him if he had ever published these facts and he said he had not.

The doctor stands very high in the estimation of the people and the profession where he is known, and is regarded as strictly reliable.

Now, what do you think of his treatment? Some of our most useful knowledge has been discovered accidentally. It was an accident that led Dr. Marion Sims to invent his Duckbill Speculum—so of many other discoveries. Now, if one hundred grains of quinine can be given at a dose, and a like dose repeated every hour until three hundred grains have been given (as was done in one of his cases), without any bad effects, it is certainly something new in the administration of that particular drug.

Another question naturally arises: "Will any other disease bear such large doses, or does it act in this particular disease as whiskey does in the bite of a poisonous snake? It is known that in dangerous snake-bites men have drunk as much as a quart of strong whiskey without intoxication or any serious effects. Then, may not a man suffering of traumatic tetanus bear quinine in like proportion? If quinine in such unreasonably large doses will cure traumatic tetanus, the profession ought to know it, hence my object in this communication, besides they are greatly indebted to that mistake for this knowledge.—*J. A. Reagan, A.M., M.D., Weaverville, N. C., in Philadelphia Medical Summary.*



THE DIGESTIBILITY OF VARIOUS KINDS OF FOOD ACCORDING TO VANDERBECK.—*Meats.*—Easy to digest: Mutton, venison, hare, sweetbread, chicken, turkey, partridge, pheasant, grouse, beef. Hard to digest: Pork, veal, goose, liver, heart, brain, lamb, duck, salt meat, sausage. *Fish.*—Easy: Turbot, haddock, flounder, sole, oysters, trout, pike. Hard: Mackerel, eels, salmon, herring, salt fish, lobster, crabs, mussels, cod. *Vegetables.*—Easy: Asparagus, French beans, cauliflower, beets, potatoes, lettuce. Hard: Artichoke, celery, spinach, boiled cabbage. *Fruits, etc.*—Easy: Baked apples, oranges, grapes, strawberries, peaches, cocoa, coffee, black tea, claret. Hard: Apples, currants, raspberries, apricots, pears, plums, cherries, pineapples, chocolate, pickles, beer.—*Journal of Reconstructives.*

SAL ALEMBROTH—SIR JOSEPH LISTER'S LATEST ANTISEPTIC.

It may be news to a great many to learn that Lister has discarded the use of the spray almost entirely, the only cases he has used it in during the past fifteen months being operations involving the peritoneum. I have heard him say that of late he has become convinced that it was by no means to the antiseptic properties of the spray that the good results have followed. After careful examination and study, he believes that the germicide properties in a solution of 1-40 carbolic, thrown by the spray into the air three or four feet, to be nil, or nearly so, and the sole benefit derived was due to the irrigation and absolute cleanliness induced. Carbolic acid was superseded by perchloride of mercury; this, when used for dressing, was, from its forming an insoluble albuminate of mercury, irritating, and thus an unsatisfactory dressing. He now uses sal alembroth exclusively in his wards for dressings, and it has so far given very fine results. It is a double mercurial salt formed by the sublimation of a mixture of perchloride of mercury and chloride of ammonium, exceedingly soluble. The salt was known to the alchemist; it has not been used in medicine in modern times. Lister prepares his dressings now with a 1-100 solution of this, gauze cotton-wool, lint, bandages, draw-sheets, and where the wound is covered by the shirt it is rendered septic by dipping it in the solution and drying before the fire. To make any of these dressings all that is necessary is to soak them in this solution and dry. It, not being volatile, does not require to be sealed in tin cases. He also colors these dressings with an analine blue 1-1000, the benefit to be derived from which is that wherever an alkaline discharge comes in contact with the dressing, the blue is removed and turned reddish, enabling you at once to see where the discharge has been, if the quantity was ever so small and had dried up before the dressing was removed. There is one precaution in using this dressing, and that is this: the dressing being dry and frequently handled might have some septic matter from bed-clothes, hands, etc., so he always dips it in 1-2000 perchloride just before applying it. He is making a sal alembroth protective, which will be surcharged with the antiseptic, so that, as a discharge comes through a dressing, it will come in contact with this protective and can be kept aseptic.—*Can. Ph. Jour.—American Practitioner and News.*

ANNUAL MEETING OF THE SOUTH CAROLINA MEDICAL ASSOCIATION.

The South Carolina Medical Association convened in its annual session in Camden, April 20th, 1886, President O. B. Mayer, Jr., in the chair.

Addresses of welcome were delivered by Gen. D. J. Kenedy and Dr. Deschaupure in behalf of the citizens and the Kershaw County Medical Society.

The President's Annual Address was delivered, which was replete with interest and information. He showed the great benefits that accrued to the people at large, as well as the profession who were present, from the general dissemination of knowledge and experience which had been gained during the past year, and he therefore urged a general attendance, and pointed out the numerous advantages to be gained therefrom.

Dr. S. W. McBride, of Springfield, Missouri, sent an article on placenta prævia, and it was read by proxy. He narrated a case in which the condition of central implantation was not discovered until the patient was so exhausted from hemorrhage that the uterus failed to contract and death ensued. He drew the following conclusion: "In all cases of complete placenta prævia after the seventh month to temporize is folly; delay is fatal; deliver at once, the opinion of many good men to the contrary notwithstanding.

Dr. Charles W. Kollock read a paper on sarcoma of the orbit, with recovery.

Dr. J. C. McMillan read an article on antipyrine, its nature and uses. He concluded as follows: 1. The temperature falls gradually and remains so for from twelve to eighteen hours, when it again rises; hence it does not exterminate disease, but relieves unfavorable symptoms. 2. The pulse and respiration decrease in proportion to the fall of the temperature. Not only are the pulse-beats diminished, but also the tension. 3. It is indicated in pneumonia phthisis, typhoid fever and other diseases where a reliable antipyretic is essential. 4. It gives rise to very few secondary symptoms, and in this respect is superior to quinine, which causes tinnitus aurium, anorexia, etc.

Dr. T. L. Parker showed two interesting specimens of diseased

testicle, one a strumous testicle, and the other almost complete ossification or calcification of the tunica vaginalis, so much so that when an incision was made into it the walls flew open and remained so, resembling greatly a clam shell with the interior removed.

Dr. George G. Kinloch showed specimens of bladder and urethra, containing incised stones, one of which had been removed from the urethra, and one was so much incised in the walls of the bladder that it was entirely concealed. He showed, also, a knife which his father, Dr. R. A. Kinloch, had devised for the purpose of opening long fistulous tracks and introducing a seton at the same time. It had a concealed blade with an eyelet on one side, through which a seton could be passed and left in position.

Dr. Cornelius Kollock reported three cases of laparotomy, with recovery, in which he had depended entirely on cleanliness and hot water. He claimed that when carbolic acid became strong enough to be germicidal it was homicidal, and also stated that this article was regarded by many of the most experienced surgeons and ovari-otomists as worse than useless. Keith, Bantock, Von Bruces and Lawson Tait all say that they do better without than with it, and that the time was fast approaching when soap and hot water would be the only reliable antiseptics.

Dr. J. K. Bratton, of York, reported a case of double uterus and double vagina complicated with post-tubal pregnancy—laparotomy with successful result. The doctor's case was unique and created considerable comment and discussion.

Dr. James Graves, of Darlington, read a long and exhaustive article on puerperal fever. He endeavored to prove that the morbid principle was produced by ptomaines, and cited several cases in support of his assertion, where it had been directly attributable to that source, i. e., retained placenta and pus from an old ulcer. He was an implicit believer in cleanliness and disinfection as a means of cure.

Dr. F. Peyre Porcher reported cases of aspiration of the chest (third series), eight pints of purulent effusion having been withdrawn in one case.

The following officers for the ensuing year were then elected :

President—Dr. Cornelius Kollock, of Cheraw.

First Vice President—Dr. J. K. Bratton, of York.

Second Vice President—J. W. Moore, of Spartanburg.

Third Vice President—W. C. Wannamaker, of Orangeburg.
 Corresponding Secretary—Dr. J. L. Dawson, Jr., of Charleston.
 Recording Secretary—Dr. W. Peyre Porcher, of Charleston.
 Treasurer—Dr. Deschaupure, Jr., of Charleston.

The Society then adjourned, to meet in Aiken, on the second Tuesday in April, 1887.

W. PEYRE PORCHER, M.D.,
 Rec. Sec. S. C. M. A.

CORRESPONDENCE.

WILLOW GREEN, Greene County, N. C., {
 August 5th, 1886. }

Messrs. Editors North Carolina Medical Journal:

In order for our home MEDICAL JOURNAL to become emphatically *multum in parvo*, the medical profession of the State must take interest enough in it to subscribe and pay for it, also furnish clinical experience to its columns. Thus actuated, I indite the following attempt to commit suicide with chloral hydrate :

Mr. F., aged 45 years, who has been paying supreme homage to the shrine of Bacchus for the past eight years, and who, in that time, has had several attacks of *mania a potu*, sent to me the first of June with a request that I send him some chloral hydrate, as he had been drinking for some days, and was very nervous—could not sleep, and feared another attack of *delirium tremens*. I sent him a four-ounce bottleful of chloral hydrate in solution, 120 grains to the ounce, making 480 grains, with written direction to take a teaspoonful every hour till sleep was induced. He took two teaspoonful doses from the bottle, which had the desired effect, therefore the balance was put away.

On the 14th day of June just after dinner, then very drunk, at 12 M., he informed his wife that he was wearied with the troubles and vexations of life, and therefore was going to commit suicide. His good wife, for she is a most excellent lady, thought but little of what he had said, and did not notice him for some little time, but in a few moments sent her niece to look after her absent husband. Just as the niece entered the door of the room

he was in the act, and did gulp down the balance of the contents of the four-ounce bottle, which contained 420 grains. A messenger was at once sent for me, but I was professionally engaged, and did not reach the bedside of the gentleman until seven hours after he had gulped, as I thought, a lethal dose of chloral. I carried with me a stomach-pump, but it was of no good, as absorption had done its work. He fell into a sound sleep very soon after taking the chloral, and every attempt failed to arouse him. When I arrived, at 7 P. M., his face was flushed, the eyelids were closed, the pulse was quick (140) and bounding, and he log-like as to sensibility; deglutition was a failure, therefore I was forced to rely upon artificial heat applied locally. I could not afford to take the risk to use the antidote, strychnia, though I would not hesitate to give chloral as an antidote for a lethal dose of strychnia.

Mr. F. made a happy return to consciousness next morning, about nineteen hours after taking the dose, and stated that he did take, as said by the niece, all the contents of the bottle, and I know that the bottle did at first contain 480 grains chloral hydrate, weighed, and not guessed at. He admits that he was very drunk at the time of drinking the chloral, having drank not less than one quart of spirits that morning. Now, this looks like too many coons up a chloral tree, yet I am satisfied in my mind that they were there.

This case proves, beyond the shadow of doubt in my mind,, that the chloral was antagonized by the alcoholic stimulants taken before it.

“A dose of thirty-five grains of chloral proved fatal in thirty-five hours to a young lady aged 20, while there have been two cases of recovery in which doses of 160 grains were taken, and one in which a man recovered after taking 180 grains dissolved in syrup.—*Brit. Med. Jour.*, 1875, p. 778.”

Recovery in the above cases is said to be owing to treatment, My case made a good recovery, but I cannot say it was my treatment, but think he took the antidote before he did the chloral.—

Very respectfully,

E. H. HORNADAY, M.D.

DR. JANEWAY speaks highly of frozen milk in irritable stomach ; nutriment and anti-phlogistic measures are combined.

LONDON LETTER.

LONDON, July, 1886.

Messrs. Editors North Carolina Medical Journal:

Prominent among the medical societies of London is the Ophthalmological Society of the United Kingdom, which holds its meetings in the metropolis. Mr. Jonathan Hutchinson has for three years been its President—a man whom one of our best informed North Carolina physicians has described as a specialist in every department of medicine. He stands as well among his professional brethren in London as with the world at large. There is no one for whose opinion the surgeons of the city have a higher regard. But if it is a rule that very distinguished men may be picked out in a crowd by their personal appearance alone, Mr. Hutchinson is an exception. He seems scarcely more than fifty years old, is tall, rather thin and round-shouldered, has dark hair and a dark complexion, an intelligent but homely face, and might pass himself off at the State Fair or anywhere else, as a North Carolina farmer without the slightest fear of suspicion. When he speaks, however, you say at once that there is a master. Yet he is not dogmatic. It is a pleasure to listen to him. His style is simple and straightforward, and he has his large experience at ready command.

Besides the President, discussions were participated in, while I was present, by Dr. Hughlings Jackson, Dr. Carter, Mr. Nettleship and many others. Dr. Jackson, a man of large frame and fine appearance, with grey hair and beard, very much marred the effect of his remarks by speaking in such a low tone that he could be heard with great difficulty. The same may be said of Mr. Nettleship, who has a peculiarly muffled voice, to which it is anything but agreeable to listen. He has, however, one of the keenest intellects in the profession, and being still comparatively young, and already one of London's first oculists, is sure of a still more brilliant future. The man whose contribution to one of the recent meetings was the most polished and brilliant, from a literary point of view, was Dr. R. Brudenell Carter. This was a paper on "Some Practical Points in the Extraction of Cataract," and was in the nature of a reply to one by Mr. Anderson Critchett, in which he had advocated the rejection of the speculum and the elevation of the upper lid by the middle finger of that hand of the operator which held the fixation

forceps. Dr. Carter agreed with him in regard to using no speculum, saying that he had given up its use for many months. His method of dealing with the upper lid was to have it extracted by a Noyes' elevator in the hands of an assistant. In the discussion which followed it became evident that the differences of detail in the operation were as many as the number of speakers. It is the same case at Moorfields. No two operators proceed in exactly the same way. The most interesting method is one with which Mr. Nettleship is now experimenting. It consists in combining a procedure employed by Mr. Couper with one lately introduced by McKeown, of Dublin. After doing an iridectomy, he introduces a Förster's forceps, which is like the ordinary iris forceps, except that the blades are toothed along their convexity for about a quarter of an inch from the points, opens the blades in the middle of the anterior chamber, as widely as the iris will allow, presses the teeth gently, but firmly, against the anterior capsule, closes and tears away as much of it as will come. Frequently it gives way along the periphery and is drawn out entire. No curette is used. He then presses out the lens and washes out any remaining soft matter with a stream of warm water introduced into the anterior chamber through the nozzle of a Teale's suction tube. Distilled water is used and is rendered aseptic, so far as possible, by boiling and stopping the flask, while steam is escaping, by a rubber stopper. This is supplied with two glass tubes, one of which furnishes the water for the nozzle, on the syphon principle, and the other, while admitting air, is plugged with cotton to prevent the entrance of germs. The washing out of the soft matter is done by McKeown by means of a syringe, as described in the *British Medical Journal* of June 20th, 1885.

This operation, when successful, offers very brilliant results, since there is no capsule or soft lens matter left behind to obscure the vision, but it behooves conservative surgeons to await the verdict of time before trying it in private practice. Mr. Nettleship's first operation was followed by iritis, although very carefully performed. Of the second I do not yet know the result.

English medical men have their controversies in regard to professional ethics as well as those of the United States, although they have no prescribed code. There is quite a bitter feeling exhibited at present by general practitioners against the consultants-

This class is more numerous and more clearly defined than is the case with us. Many surgeons and physicians engage in consultation practice and hospital work to the exclusion of everything else. It is not infrequent for a young man who has sufficient means to admit of such a course to fit himself for this kind of practice and never engage in any other at all. His method of doing this is to continue for years in attendance upon the practice of one or more of the hospitals (paying the prescribed fee therefor) until he succeeds in securing some hospital appointment, when he considers the foundation of his fortune as laid. The general practitioners are complaining that many of the consultants are not only taking private cases of their own, which is not considered actually illegitimate, but are also robbing them of the patients brought to them for consultation. When a wrong is sought to be set right the Englishman's first step is the formation of an association; and so in this case an association has been formed to deal with the evil complained of. It is sought to establish a rule that no consultant shall treat any case not brought to him by a general practitioner, and in the meantime any consultant who shall offend by "absorbing" a patient brought to him by a member of the association, is threatened with the boycott.

A recent visit to some of the wards of King's College Hospital with Sir Joseph Lister, confirms the opinion expressed in a former letter as to the commendable way in which the material at hand is used for instruction. The liberty of accompanying the visiting physician or surgeon in his daily rounds is not confined to the students; any medical man may do so, and, by paying a fee, may do so habitually. The wards of a London hospital are much the same as those anywhere else. The operating room is small in comparison with the immense amphitheatre at Bellevue. It is called here the theatre. No seats are provided, the tiers of benches are for standing room only, and have heavy iron railings on which to lean. They rise so steeply from the area that in some theatres the students sitting on the railings, as they very frequently do, seem to be in imminent danger of falling upon the table. Lister is a ruddy-faced, fine-looking, portly Scotchman. He is a careful, but not a rapid or particularly brilliant operator. He stated that since October last he had not used the spray at all, and said, with a smile, that since giving it up he had had better results. He still applies the antiseptic principles in other respects, the bichloride of mercury taking the place of carbolic acid to a large extent.

The bichloride solution is colored blue as a ready means of identification. This seems to be a general fashion, and blue gauze and cotton are now plentiful in all the hospitals.

The most brilliant operator in general surgery whom I have seen is Mr. Bryant, of Guy's, although Sir William McCormac and Mr. Christopher Heath are very fine. In an amputation of the breast by Mr. Bryant, the cutting was finished in a few seconds, although there was no haste or apparent straining at rapidity. There are some who seem to pride themselves on their quickness.

A fellow-countryman was present at St. Bartholomew's when Mr. F. Howard Marsh was doing an amputation in the lower third of the thigh, and, as the operator was about to begin, turned to speak to a student behind him. When he looked to see the operation, the leg was off. The late Dr. Wood, of New York, used to tell the students, with great relish, how he showed a British surgeon how the Americans could operate. He inveigled the British into doing an amputation first, and, after this had been slowly and carefully finished, a second case of the same kind was brought in. He took the knife with a flourish, had the limb off in twenty seconds, and turned the case over to an assistant to dress.

One of the most fascinating places in London for a doctor is the Museum of the Royal College of Surgeons, facing one side of Lincoln's Inn Fields. It is better known by the name of the Hunterian Museum, in honor of that great man who is so often spoken of as "the immortal John Hunter." The magnificent collection of 10,000 anatomical preparations to which Hunter so enthusiastically devoted his life, was bought by the Government a few years after his death, in 1793, and was presented to the College of Surgeons. Many and important additions, by purchase and gift, have since been made, and it is one of the largest and best arrayed medical museums in the world. It is contained in three large rooms, each having two extensive galleries, so that there are practically three stories. To give an idea of its vast extent, it may be stated that eighteen volumes are required for the mere catalogue of the specimens in the first room alone. Normal human anatomy, especially osteology, is very fully represented. Of crania there are between one and two thousand, including specimens of every race and of many different ages, from the ancient Egyptian to the present, not to mention prehistoric fragments. Of much interest is the skeleton of the Irish giant, O'Bryan, seven feet seven inches

high, which Hunter spent so much time, trouble and money in stealing. In striking contrast to these enormous bones, is the skeleton of a girl of ten years, which is only twenty inches high. In the same case are the remains of the notorious thief and thief-catcher, Jonathan Wilde, hanged in the last century, and others of more or less interest. The Museum is also particularly rich in comparative anatomy, apparently the whole animal kingdom being represented, vertebrates and invertebrates, fossil and recent. Thorough completeness seems to have been aimed at. It is a striking illustration of the far-reaching character of medical science when the skeletons of whales and other large existing mammals and of various gigantic animals are found in a medical museum. Some of them are of special interest: the dog is represented by the skeleton of the favorite deerhound of Sir Edwin Landseer, the horse by that of a Derby winner, the tiger by that of the first one killed by the Prince of Wales. The physiological series also includes the lower animals, as well as man, and fills three galleries. The specimens are, most of them, preserved in spirit. Those showing the results of some of Hunter's experiments, described in his lectures, are very interesting, such as the cock's heads with spurs and human teeth growing in the comb. Of course the importance of pathology, in all its branches, is fully recognized. Among the many hundreds of specimens illustrating injuries and diseases, is a portion of small intestine having upon it a small cancerous nodule. It formed a part of the collection of Sir Astley Cooper, and was given him by Dr. Barry O'Meara as coming from the body of Napoleon I. It is believed by many to be genuine, but there is evidence which makes this doubtful. The reports of the surgeons who made the autopsy speak of the intestines as being normal, and it is known that the great man's attendants took care to prevent anything being removed. The series of calculi is very large, and there are many concretions of different sorts from the domestic animals, including a hair ball, from the stomach of an ox, forty inches in circumference, and an intestinal stone, from a horse, weighing nearly eighteen pounds. The valuable collection of Toynbee, illustrating the diseases of the ear, is also here. The cases containing parasites are also well filled. But perhaps the gem of the pathological division is the exhibit representing the diseases of the skin, presented by Sir Erasmus Wilson. It consists of 589 models, casts in wax and plaster, drawings, photographs, engravings and preparations. The models in wax are marvelously well executed. There is absolutely

nothing to be desired in the study of diagnosis except the aid given by the sense of touch.

When medical men have access to such museums as this and to such libraries as the one in the same building belonging to the College of Surgeons, and have the advantage of so much hospital experience, it is not surprising that the leaders of the profession are to be found, as a rule, in the large cities. All the greater honor is due to those who rise to prominence without the advantages enjoyed by their more fortunate brethren.

K. P. B., Jr.

UNIVERSITY OF VIRGINIA—NEW PROFESSORS.—We are gratified to learn that Dr. William C. Dabney has been elected Professor of Medicine, Medical Jurisprudence and Obstetrics, to take the place of Dr. J. F. Harrison; also, that Dr. W. B. Towles has been chosen Professor of Anatomy and Materia Medica, to succeed Dr. J. S. Davis. We consider the new selections very judicious, and feel satisfied that the standard of scholarship will be sustained at its previous high grade.

It is said that the average price of drugs has fallen, within the last three years, fully one-third. In some special instances the cause for the decline is apparent; in others, authorities differ. In the case of quinine there has been a reduction from \$3 in 1880 to 52 cents at present. In opium, the course of prices has been similar, the ruling quotation of 1880 being \$4.75 a pound, against \$1.75 to-day. In the case of quinine, the supply has been vastly increased of late years by the cultivation of the cinchona tree in Ceylon and Java, and the production of a richer bark; a bark yielding two per cent. was formerly considered merchantable, whereas the present average yield is more than double that. The production has doubled, while the demand has remained the same. The present price returns so poor a profit to the growers of the bark, that many plantations have been destroyed during the last year to make way for tea or other culture. Quinine, moreover, was sometime since, by a change in the tariff law, put on the free list, while opium remained subject to duty. Opium varies in price according to the stringency of laws against its importation or use in various countries, the American market being at present so over-stocked that a lot was recently sold at less than \$1.75 a pound, which cost \$4 not more than a year ago.—*Boston Medical and Surgical Journal*.

NOTES.

PROF. BARTHOLOW recommends salicilic acid for removal of bile pigment from the blood, says the *American Medical Digest*, after the cause of the jaundice has been removed. Its action is prompt and satisfactory.

THE metallic taste from iodide of potassium solution may be avoided by taking a fresh solution. A solution of the salt after a fortnight has a pale, straw tint, due to its beginning decomposition; this altered fluid it is which imparts the taste and metallic odor to the breath.

WE have received the announcement of the Fourteenth Annual Meeting of the American Public Health Association, to be held at Toronto, Canada, October 4th-8th, 1886. For the purpose of securing as large an attendance as possible, the committee will send certificates, giving the benefit of the reduced rates of transportation to all persons who express a desire to become members. Dr. P. H. Bryce is the chairman of the Local Committee of Arrangements, and Theodore S. Covernton is the chairman of the Transportation Committee, both at Toronto. The Conference of State Boards of Health will be held at the same time and place.

DR. PENN (*Texas Courier Record*, June, 1886) reports a case of splenitis of malarial origin, which resisted all treatment and resulted in loss of the organ. The doctor found a small red circle near the umbilicus, with a fluctuating center, into which he made an incision. There was no pus from the incision, but a thick fluid, like coffee-grounds, and following this the substance of the spleen was expelled, which was free from adhesions, measuring twelve inches in length by seven in width, "sack-shaped," externally smooth, internally honey-combed. The patient made a good recovery, and has since been in excellent health and entirely free from malarial trouble.

ATROPINE AND WHISKEY AS AN ANTIDOTE FOR CARBOLIC ACID.—Dr. S. E. Bascom, of Salt Lake City, Utah (*Philadelphia Medical Times*), reports a case of carbolic acid poisoning that recovered under the administration, hypodermically, of two minims of solu-

tion of atropia, gr. 4 to $\frac{3}{4}$ j., and two drachms of whiskey. The patient was unconscious, cyanatic, almost pulseless, respiration rapid and irregular, with mucons râles throughout both lungs. The mother had given several ounces of olive oil. The case was considered hopeless, and the treatment was adopted more to satisfy friends than from any expectation of favorable results.

COCAINE IN GYNECOLOGY.—Dr. George Woodruff Johnson, in the *Medical Record* of July 17th last, has compiled a large number of instances of the use of solutions of cocaine in operations upon the vulva, vagina and uterus, the report coming from surgeons in this country and Europe. The extent of the field of usefulness of this new agent seems quite large and well determined. In vaginismus, irritable carbuncles, ulcer in vulvo, vaginal fold, vaginal hyperæsthesia and dysparemia from any cause except traumatic and congenital stenosis, the application of pledgets of cotton saturated with cocaine has effected sufficient insensibility, and maintained it long enough, to allow of careful examination, dilatation or a minor operation on the parts. The strength of the solution took a wide range, between four and twenty per cent., and the duration of insensitiveness was likewise different in the experience of the various operators. The cocaine solution, however, promises to fill the place of ether in minor operations, and to be without the danger and discomfort which always attends anæsthesia from the latter agent or from chloroform.

TOLERANCE OF THE ORGANISM.—The Paris correspondent of the *Medical Record* of the same date says Dr. Robin communicated to the Medical Society of Hospitals of Paris the history of a patient, and he gave it the above name. An old woman, 79 years of age, died in a hospital with the sequelæ of pneumonia. She had been treated by the narrator on different occasions for slight attacks of bronchitis, but her life had been spent in what she considered fair health. The autopsy, however, revealed that she had been afflicted with a double aneurism of the abdominal aorta, which had cured spontaneously, and that all the biliary ducts, intra- and extra-hepatic, were dilated and filled with calculi of different dimensions.


DR. A. M. FAUNTLEROY, one of the best known physicians in Virginia, died at his residence in Staunton, Va., on June 19th. Dr.

Fauntleroy was born in Warrenton, Va., on July 8th, 1837. He was educated at the Virginia Military Institute, and at the University of Virginia and University of Pennsylvania. He entered the United States Army as assistant surgeon in 1860, but resigned his position when Virginia seceded. He served during the war as surgeon and chief medical officer of the staff of Gen. Joseph E. Johnston, and also as medical director of the department of North Carolina, located in Wilmington. At the close of the war Dr. Fauntleroy located at Staunton, where he has since resided. He has enjoyed a large practice in the Valley, and has held numerous positions of responsibility and trust. For several years he was in charge of the Western Lunatic Asylum, located at Staunton.—*Maryland Medical Journal*.

HAVING made arrangements with the *Therapeutic Gazette* and *American Medical Digest* by which we can offer those valuable journals in combination with the NORTH CAROLINA MEDICAL JOURNAL at reduced rates, we make the following offer to new subscribers and to those who wish to renew their subscriptions :

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READING NOTICES.

UTERINE INFLAMMATION.—*Rio Chemical Company*:—Mrs. W. H. consulted me on January 20th, 1886. On examination she was found to be suffering from chronic uterine inflammation, elongation and ulceration of the os uteri, with antiversion, and the usual concomitant symptoms, such as frequent desire to micturate, inability to walk, etc. Her womb was easily replaced, but returned to its abnormal position on her attempting to walk. Various kinds of pessaries were attempted, the ulceration having been previously

healed by the use of the nitrate of silver and the glycerine plug, but their presence could not be tolerated. The recumbent position was then enforced for a fortnight. During this period her only treatment consisted of mild saline aperients at intervals of two or three days, and the exhibition of Aletris Cordial in drachm doses three times daily, gradually increased to two drachms. She then began to take gentle exercise, and has steadily improved, and is in expectation of soon becoming a mother. She had never been pregnant previously.

HY. BAYFIELD, L.R.C.P., Surgeon.

1, Somen Villas, Lavender Hill, S. W., London, Eng., April 3, '86.

—(o)—

CHRONIC STARVATION.—Upon whatever other points they may differ, authorities on dietetics agree that nitrogen is the most essential of all foods, and that a certain amount should be taken regularly. Diminution of the quantity of food, whether from inability to procure it, or a disinclination for it, generally means decrease or absence of nitrogen. That this leads to dire results is a well established fact. Graily Hewitt, in an address on "Chronic Starvation and Delicate Females," before the British Medical Association, said: "For the last ten years or more I have carefully inquired into the history of patients suffering with uterine and ovarian disease, or some affection incidental to child-bed, and I have found a continuous insufficiency of food, especially the nitrogenous, to have existed almost universally, so that I have naturally come to regard this chronic starvation as an important factor in disease."

The serious troubles arising from insufficient nourishment are also shown in a marked manner in the case of delicate females during gestation, a large proportion of whom are so enfeebled by the constantly recurring paroxysms of vomiting and the consequent diminution of food assimilation, that when the period of parturition arrives they are so reduced in strength as to be particularly susceptible to the attacks of disease incident to child-birth, and the offspring is ushered into the world puny and feeble, and especially liable to a complication of physical evils solely attributable to its starved and anemic condition.

Colden's Liquid Beef Tonic contains precisely the elements indicated by Dr. Hewitt as being so essential, combined with citrate of iron, cinchona and simple aromatics, forming at once a palatable nutriment and reliable tonic, and its range of usefulness embraces all cases of debility of whatever origin. It has been in use fifteen years, and those who have used it most are most emphatic in its praise.—*Massachusetts Medical Journal, Boston Mass., June, 1886.*

—(o)—

INGLUVIN.—A very learned name for a remedy is Ingluvín. It is the essential principle of the gizzard, and bears the same relation to

poultry that pepsin does to the higher animals. The honor of its discovery and utilization, in its crude state, remotely dates with the Chinese astronomer, as well as to the Causasian chemist, in its refined condition. From time immemorial the inhabitants of the Celestial Empire have used the gizzard of chicken and ducks in nearly all made dishes. Their writers have recommended the practice as a sovereign treatment of dyspepsia, weak stomach and vomiting. A favorite prescription of Chinese physicians for chronic indigestion is to cut up and digest chicken gizzards in hot water until they are reduced to a pulp, and then add some spices. A tablespoonful or two of the resulting paste is taken at each meal until the patient has entirely recovered. From China the practice passed to other parts of Asia, and was adopted here and there among the Mediterranean peoples. Strange to say, it was never learned by the great nations of Europe until the latter part of the present century. On the other hand, the organic chemists of Europe discovered, about 1856, a powerful nitrogenous radical in the gizzard. Experiments thereafter showed it to possess many of the qualities of pepsin. These experiments led to its isolation. Numberless experiments have proven it to be a very valuable addition to therapeutics. Where pepsin refuses to act, and where, in severe cases, it has been rejected by the stomach, Ingluvin effected relief rapidly and with the greatest ease.

In four recent cases of poisoning by root beer (Brooklyn, June, 1886), Dr. George Everson, Jr., a well-known physician of that city, reports that after pepsin and all similar compounds had been rejected by the stomachs of his patients, Ingluvin stayed the retching and enabled them to retain and digest food.

Prof. Robert Bartholow, M.A. M.D., LL.D., in his late work on "Materia Medica and Therapeutics," says:—INGLUVIN.—This is a preparation from the gizzard of the domestic chicken—*ventriculus callosus gallinaceus*. Dose, gr. v.—℥j.

Ingluvin has the remarkable property of arresting certain kinds of vomiting—notably the *vomiting of pregnancy*. It is a stomachic tonic, and relieves *indigestion*, *flatulence* and *dyspepsia*.

The author's experience is confirmatory of the statements which have been put forth regarding the exceptional power of this agent to arrest the vomiting of pregnancy. It can be administered in inflammatory conditions of the mucous membrane, as it has no irritant effect. Under ordinary circumstances, and when the object of its administration is to promote the digestive function, it should be administered after meals. When the object is to arrest the vomiting of pregnancy, it should be given before meals.—*From the American Analyst, August 1, 1886.*

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLET T THOMAS, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

REPORT OF THE CHAIRMAN OF THE SECTION ON MEDICAL JURISPRUDENCE.

By J. D. ROBERTS, M.D., Goldsborough, N. C.

(Read before the North Carolina Medical Society, at New Bern,
May 21, 1886.)

(Continued from the August Number.)

Dr. Charles E. Johnson, in writing of this test, asks: "Who is to be the judge of what is right and what is wrong?" All men's judgments are not the same on this or any other question. What the judge, with his learning, would denounce as an iniquity, the jury, perhaps less informed, might view very leniently as a mere peccadillo, and the prisoner in the box, with none of the advantages of education, usages of polite society or Christian influences, would look upon as no wrong at all.

Physicians who have given any consideration to the matter, know

that this test is impracticable ; that the symptoms by which insanity is recognized are as variable almost as the number of cases. To claim that because a man has a knowledge of right and wrong he is sane in all cases, is erroneous, or even that because he has the power to resist the wrong and keep to the right, he is sane, is not true. It is within the province of the law to say that this shall be a test of responsibility, *perhaps*, but when the question of insanity arises, the jurist, knowing nothing of the disease, should leave it to the physician to diagnose. If insanity is to be the test of responsibility, then the knowledge of right and wrong as a criterion is an error bequeathed to us as another instance of "that jealous affection and filial reverence, which have converted our (legal) code into a species of museum of antiquities and legal curiosities," along with the right of trial by evager of law or by ordeal. Dr. C. H. Hughes, in an editorial ("The Judicial Psychology of the Guiteau Trial"), writes thus of the subject : "And even when the learned judiciary, whose province it is to *interpret* rather than *make* pathological laws, as it is likewise his province to determine what municipal laws *are*, and not to *make* them, forms a judicial psychology not sustained in the laws of morbid mental movement, sound psychiatry may be thereby set back a quarter of a century or so before courts ; but the truths of psychiatry remain the same as though no judicial fiat had sought to make them what they are not, and they will ultimately appear uppermost, despite judicial decision that they are what they are not.

"To ignore motives and resistless impulses of mind deranged, does not, and will not, obliterate them as facts from the phenomena of mental disease."

I cannot better close this special feature of the question than by quoting from one of the legal profession, who, in speaking of the medical and legal professions, says this of the jurist : "He contributes little or nothing to the stock of human knowledge. He has given himself to the study and application of a science—if indeed it be a science—which as often deals with artificial principles and dogmas as with great abiding truths. In grasping at the philosophy of jurisprudence he is fettered, even in this day and generation, by precedents of scholastic absurdity, which date back before the Wars of the Roses, and by statutes, the very records of which were lost before the Reformation. The scientific aim and

effort of his professional life is to show that 'thus it is written.' The legacy which he is able to leave behind him to society is therefore rarely better, in its best estate, than a tradition of high faculties fearlessly and honestly dedicated to justice and duty."

This decision, or rather test, of accountability in alleged insanity before the courts, is probably founded on the belief that the will of man is preëminent, controls all mental faculties, and acts independently of them. Volition is not an abstract quality of the mind, with a definite nervous centre, but is dependent for its action on many contingencies in connection with the other functions of the brain. Volition can be exercised only after deliberation, which we generally call reason or the reasoning powers of the individual; this is but the recognition of certain ideas or experiences of a painful or pleasant character consciously recalled by an act of memory. Thus to produce the best results as to man's power of exercising his will there must be complete harmony of action with all the brain functions, and he who best harmonizes these functions by judicious exercise, will approach the nearest to perfect power over those ganglionic cells which are the *associated* centers of ideas which control that faculty called volition."

Should there be such a state as to impair the utility of these cells in the brain there will be a want of harmony in the performance of function, the connecting links will be severed, and the action resulting will not be the same as in a healthy organism. Indeed, we see daily the effects of such action in that we have better control of our feelings, desires, etc., at one time than another. How often do we find our whole mental faculties given over to the consideration of some subject most probably faithful, in spite of any will power we may exert, keeping us awake through the long hours of the night, and forcing itself into our dreams should we doze. And yet the man whose brain is diseased, whose thoughts are consequently morbid, in whom this healthy power of the will is lost by reason of inharmonious action, this man, who has lost all control of himself by reason of disease, is expected by the stern edict of the jurist to exert more will power, and put away an unpleasant thought or refrain from an action, than the man in full possession of his powers of mind.

Every alienist can recall numbers of cases where the insanity was beyond doubt, still having a knowledge of right and wrong, but

where irresponsibility was evident. No cast-iron rule to fit all cases can be made, nor can any single test be applied that will be just and equitable. The question in cases of alleged insanity should be, Was the action the result of a brain diseased in such a manner as to interfere with function? Or, as it has been stated, How has *disease* distorted the normal relationship of the man to the crime and surroundings"?

Time and again has this question been discussed in all its bearings, from both legal and medical points of view, with always a like result—each claiming the victory in the contest, and each pursuing the same course as before: the jurist still clinging to his cast-iron rule, and the physician holding to the faith he has in scientific studies and psychological medicine.

Another principle in the execution of our laws in relation to insanity to which I would take exception, is found in the Supreme Court decision requiring that "Hereditary insanity can only be shown where it is of the same kind as the prisoner's."

Chief Justice Pearson, in rendering this decision, speaks thus of hereditary insanity: "It is a lamentable fact, admitted by everyone, that such maladies are hereditary; and it would seem that the proof of the fact, that members of the family so related as to have the same blood, are, or have been, afflicted with a like malady, is admissible as a circumstance, when aided by other circumstances, and would go to show the insanity of the prisoner, although, of course, evidence of such hereditary taint in the blood, would only be one link in the chain, and would not *per se* establish the fact; but the question as to the policy or expediency of admitting such evidence in legal investigations, presents many and very great difficulties; it is wrong to exclude what may lead to truth, and yet such evidence would in numberless cases lead to falsehood, and screen the guilty in defiance of truth. On the other hand, we find it in some degree an open question in the legal authorities. Thus far the way seems to be clear: in order to render it admissible the species of insanity alleged, and that offered to be proved in respect to members of the family, must be of the same character; and the instances to be proven must have been notorious, so as to be capable of being established by general reputation, and not left to depend upon particular facts and proofs, but about which witnesses may differ, and the consequence of which would be to run off into num-

berless and endless collateral issues; so that in trying the question of the insanity of one, the supposed insanity of a half dozen would be drawn in."

If I understand the decision, it means that a case of mania produces mania in the offspring, should the insanity be transmitted. In other words, it does not recognize a transformation of type in the inheritance of this malady.

This decision is, I judge, founded upon the acknowledged difficulties in the way of admitting testimony as to heredity, following, perhaps, the Scotch law partially, which does not admit testimony of this character. That injustice would often be done by following this entirely, a compromise is effected by conforming to Esquirol, one of the first systematic writers on the subject of insanity, who wrote over a half century since. He says: "Hereditary mania manifests itself among the patients and children often at the same period of life. It is provoked by the same causes and assumes the same character." Granting that Esquirol was right, it is by no means proven that this is the rule, for in fact it might be said to be an exception, for alienists of the present day, after longer study and more experience, differ from him on this point.

An inherited tendency to insanity is dependent on so many contingencies for its development, that it is impossible to tell what form it will assume, even if insanity should supervene. By surrounding the person with the necessary safeguards in the way of mental hygiene, avoidance of troubles, excitement, etc., the tendency may not culminate in an outbreak of insanity at all. The character or form of the insanity is influenced, in a large measure, by the exciting cause, whatever, it may be. It may be the death of a friend, a reverse of fortune, the excitement of politics, religious fervor, or many other occurrences in daily life.

Spitzka alludes to the frequent intensification of the malady in the progeny, and this can be verified in almost any neighborhood, certainly in any county, can be found families degenerating as to the various nervous affections. This degeneration and intensification of the transmitted neurotic diseases is admitted by most of the writers of the present day. But we go even farther than this, and assert the transformation of type in the progeny. Owing to the difficulty in obtaining the history of cases of hereditary insanity, I have not prepared any statistics on the subject. My own observations coincide with the views quoted here.

Stearns says: "It is not the case, however, that definite forms of insanity always repeat themselves, but, on the contrary, change, so that a case of mania may appear in the second generation as a case of melancholia or acute dementia, and *vice versa*, melancholia may appear as dementia. * * * It is not necessary that the tendency towards unstable mental action should be fully developed in the parent, in order that it may so appear in the child. * * * Great singularity of conduct habitually displayed, periods of depression, irritableness and nervousness, when crossed with similar characteristics in the other parent, or other unusual ones, not infrequently develop into actual insanity in succeeding generations."

Hereditary action is held by Maudsley "to be rather of the nature of a complex chemical combination whereby compounds, not resembling in properties their constituents, are oftentimes produced, and not of the nature of a more mechanical copy." Again, he says: "Anyone who will may make the observation that when two persons of narrow and intense temperament, having great self-feeling and distrustful of others, and prone themselves to cunning ways and hypocritical dealings, mean in spirits as in habits, perhaps deceiving themselves all the while by an intense affectation of religious zeal, of evangelical, ritualistic or other extreme type, unite in marriage and have children, they lay the foundations of insanity in offspring more surely often than an actually insane parent does."

Grisenger says on the subject of heredity: "At present we can claim for tuberculosis alone an influence of hereditary circumstances in some degree equal to that exhibited by mental diseases." "Sometimes hereditary mental disorders present essentially the same characters in parents and children, and occasionally also in a whole line of brothers and sisters, appearing at the same age and terminating in the same manner, as, for example, suicide. Frequently, however, this is not the case; the psychical disorder manifests itself in different ways, partly dependent on external circumstances."

Bucknell and Tuke, in their work on "Psychological Medicine," say: "But while the same form or type of mental disorder may descend from one generation to another, it is also certain that not only may one form be succeeded by one of a very different character, but by other neuroses, as epilepsy or chorea. * * * Gaussail held that nothing is transmitted but the aptitude for some form or other of nervous disorder, and that this is wholly determined by causes subse-

quent to birth. Lucas shows that, as in an individual any nervous affection may be transformed into another, and thus prove the consanguinity of those disorders, so may the like transformation take place in parents and children."

In writing of heredity as a cause of insanity Dr. Mann says: "Insanity also may appear in the same form in succeeding generations, or it may assume an entirely different form, or even assume another form of nervous disease. Thus, it is common to see cases in which the patient, suffering from mania, the offspring may develop symptoms of epilepsy or chorea."

Chief Justice Gibson, of Pennsylvania, in admitting evidence tending to show hereditary transmission of insanity, reviews the dicta of Chitty and Shelferd as to its being an established rule of law that such evidence shall not be admitted, and says the only case where it was brought up the question was avowedly dodged, and the decision arrived at on another point of law, and says the authority of a question appealed from and left *in dubio* cannot be very great." "What if the point had been ruled by the chancellor and law judges in the House of Lords? Professedly learned in the maxims of the law, they were profoundly ignorant of the lights of physiology; yet free from the presumptuousness of which ignorance is the foster-father, they refused to rush on the decision of a question to which they felt themselves incompetent."

That the question of the admission of testimony bearing on heredity presents many difficulties is evident; it is also evident that in the light of the better knowledge of the present day, and the teachings of psychologists, that the decision now under discussion should be modified. If testimony as to heredity is to be admitted at all, let it be in accordance with the whole truth, and not by suppressing the part which may be of most use to the prisoner on trial. Many more references as to the transformation of the type, or, as the Supreme Court decision has it, "species or character" of insanity inherited from the parent, might be given, but these are deemed sufficient, especially as we can verify the position taken within our own experiences.

Non-expert testimony is allowed in insanity trials; that is, persons not physicians are allowed to testify, giving an opinion as to the sanity or insanity of the individual, but with this difference: while the expert bases his opinion on the testimony of others, and

not necessarily from observation exclusively, the non-expert can give his opinion only upon his personal observation. Judge Gaston, in rendering a decision on this question, uses the following language: "But judgment founded on actual observation of the capacity, disposition, temper, peculiarities of habit, form, features or handwriting of others, is more than mere opinion. It approaches knowledge, and *is knowledge*, so far as the imperfection of human nature will permit knowledge of these things to be acquired, and the result thus acquired should be communicated to the jury, because they have not had the opportunities of personal observation, and because they can in no other way have the observation of others."

I have already discussed the subject of what an expert is, but wish to add a few lines here. In investigations before the courts, many matters other than medical questions, demand testimony of a peculiar character from persons so situated by profession, study or observation, as to be enabled to come nearer the truth than others not enjoying the same advantages. A rickety bridge over a stream on the public road, may be pronounced unsafe by the whole neighborhood, because it has gone so far in its decay as to be evidently so to all. An immense iron structure spanning a river may seem the very embodiment of strength and durability to the general observer, yet pronounced unsafe by the engineer. Because the general observer was competent to judge of the condition of the first bridge, would or should his opinion be taken against the experts in a court of law as touching the second? A severe wound may be recognized as dangerous by any observer, while a stab, with little or no bleeding, may not seem dangerous; whose evidence is better than the surgeon's on this point? The insanity of the raving maniac is recognized immediately by all with whom he comes in contact, but who is to judge of the phases of insanity where the outward show is slight?

Under a decision already quoted, and I believe under the common law, the question of insanity is a question of fact for the jury. In other words, the jury is to judge of the insanity of the prisoner at the bar from the evidence presented. Even though they may have never seen a case of insanity, have never studied the subject, or even read a line in regard to insanity, it is their duty to pass judgment upon a matter that has taxed the brain and consumed the time of giants in intellect, without arriving at a satisfactory conclu-

sion. For assistance they have as witnesses men on a par with themselves as to real knowledge of the subject—the attorney, who has gained his knowledge of a *medical* question from a *legal* text-book, and the judge, who delivers a charge on what is insanity, with the musty decisions of by-gone days as his guides. Is it any wonder that the insane man is often convicted, or that the culprit often escapes punishment on the plea of insanity under such a state of affairs?

While non-expert testimony is competent and is often used in insanity trials, it is held that the testimony of the physician in regard to the mental state of a person is of more importance than that of a non-professional witness, and the following charge was delivered to the jury: “* * * That it was the business of a physician to understand the disease of the mind as well as of the body, and that his opinion for that reason was entitled to higher consideration than ordinary witnesses.” The Supreme Court, in reviewing this charge, uses the following language: “It may be said of the physician that he is, by the nature of his studies and pursuits, particularly skilled in the mental as well as in the physical diseases of men, and with respect to the parties upon whom he is in constant attendance, he must be supposed, as well from his superior knowledge, as from his better opportunities of observation, to be particularly well-informed as to their state of mind. What, therefore, the judge thought proper to say upon the subject of the witnesses mentioned, we do not think liable to any just exceptions.”

Did time permit, there are other decisions on matters relating to insanity that might be profitably reviewed, but as I fear I have trespassed already too long, I will here simply refer to them, and may perhaps enlarge on them in the future. The subjects of moral insanity and moral debasement are treated of in the cases of *Mayo vs. Jones*, 78 N. C. R., 402, and *State vs. Brandon*, 8th Jones, 463, neither of which is recognized. A subject of much interest, and one which should be thoroughly studied by the expert on insanity, is what evidence can be introduced as to insanity, or to show insanity. We have Supreme Court decisions on it in the famous *Johnson will case*, *Wood vs. Sawyer*, Phillips' Reports, 251; *State vs. Cunningham*, 72 N. C. R., 469; *Barker vs. Pope*, 91, N. C. R., 164.

I have tried to show some of the objections to the existing state

of facts as regards the law and the doctor, and wish that I might suggest a remedy that would be accepted. Our hands are, in a measure, tied. We can point out these errors, and give our reasons for the necessity of a change, but as the courts have *all* the authority, we can do nothing more than urge the truth and justice of our position. Dr. W. C. McDuffie recognizes this evil in a recent article, and suggests that the decision of the whole matter, so far as the insanity is concerned, should be left to the doctor.

Dr. Buckham, in his little work, urges that the superintendents and first assistant physicians of our asylums of a — number of years experience should have as part of their official duties the giving of testimony on insanity whenever required by proper authority, and without compensation. He makes several suggestions in the way of safeguards to be thrown around such experts. To have a commission composed of doctors alone, or perhaps doctors and lawyers, to judge of these cases, or to leave it entirely to an expert, *and the court be governed by such decision*, is open to objections, for we are met on the very threshold with a constitutional enactment granting to every citizen that great bulwark of liberty, the right of trial by jury. All reforms, to be permanent, should be gradual, and there is much need of care in dealing with this subject. Let us as physicians go forward fearlessly, honestly and conscientiously doing our whole duty—more we cannot do.

AUTHORITIES QUOTED IN THE FOREGOING ARTICLE.—Journal of American Medical Association, Vol. 4, No. 18, May 2, 1885; Journal of the American Medical Association, Vol. 5, No. 20, Nov. 14, 1885; The Polyclinic (Philadelphia), Vol. 2, No. 7, p. 105; State vs. Dollar, 66 N. C. R., 626; Horton vs. Green, 64 N. C. R., 64; State vs. Clark, 12 Iredell, N. C. R., 151; State vs. Clark, as above; Flynt vs. Bodenhamer, 80 N. C. R., 205; Barker vs. Pope, 91 N. C. R., 165, and State vs. Bowman, 78 N. C. R., 509; Clairry vs. Clairry, 2 Iredell, N. C. R., 78; State vs. Pike, 49 N. H. R., 399, also American Reports, Vol. 6, p. 533. From Dissenting Opinion of Judge Doe, 579; State vs. Haywood, Philips, 376. ("It is not every kind of frantic humor or something unaccountable in a man's actions that points him out to be such a man as is exempted from punishment; it must be a man that is totally deprived of his understanding and memory, and doth not know what he is doing, no more than an infant, than a brute or wild beast; such a one is never the object of punishment.")—*Maudsley's Responsibility*, p. 90. Wharton and Stillee Medical Jurisprudence, Sec. 159; Buckham's Insanity in its Medico-Legal Relations—Appendix, p. 221, where the different opinions of judges are given in groups; American Reports, Vol. 6, 584; American Reports, Vol. 6, 581; State vs. Brandon, 8th Jones,

N. C. R., 468; Insanity in its Medico-Legal Relations, 133; Insanity in its Medico-Legal Relations, 181; Alienist and Neurologist, Vol. 4, No. 1 (Jan., 1883), 141; Insanity in its Medico-Legal Relations, 242; Maudsley's Physiology of Mind, Chap. on Volition; Alienist and Neurologist, Vol. 4, No. 1 (Jan., 1883), 143; State vs. Christmas, 6 Jones, N. C. R., 471; Esquirol's Treatise on Insanity (1845), 49; Insanity. Its Classification, Diagnosis and Treatment, by E. C. Spitzka, 86 (edition of 1883); Insanity: Its Cause and Prevention, by Henry Putnam Stearns, 129; Maudsley's Pathology of Mind, 92; Maudsley's Pathology of Mind, 95; Mental Pathology and Therapeutics, by Grissenger (Wm. Wood & Co's edition, 1882), 106-109; Psychological Medicine, by Bucknell and Tuke, 63-64; Psychological Medicine and Allied Nervous Disorders, by E. C. Mann, 55; Clary vs. Clary, 2 Iredell, N. C. R., 78-83; Cornelius vs. Cornelius, 7 Jones, 593; North Carolina Medical Journal, October, 1885; Insanity in its Medico-Legal Relations, by T. R. Buckham, 172.

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J. D. ROBERTS.

CLINICAL REPORT—PROBABLE WANT OF CONNECTION BETWEEN MENSTRUATION AND OVULATION.

By R. L. PAYNE, Jr., M.D., Lexington, N. C.

(Read before the North Carolina Medical Society, at New Bern,
May 21, 1886.)

Gentlemen:—That menstruation and ovulation are coincident, is a fact which has been well-established by physiologists, but that the forces which bring about the one do not necessarily cause the other, is also so well-established that I am sometimes tempted to believe that while we must regard these processes as coincident, we are in no position to claim that they are necessarily interdependent. There are numerous cases on record in which pregnancy, which necessarily implies ovulation, has occurred in virgins without any previous menstruation, and it is by no means rare to meet with women who, nursing one infant, become pregnant with another without over having seen any sign of the menstrual flow.

Again, cases occur in which all during pregnancy the menstrual

flow recurs regularly, and yet we feel certain, from the progress of development and decline of the corpus luteum of menstruation and the corpus luteum of pregnancy, that during pregnancy the process of ovulation is in abeyance. Two cases illustrating the probable want of connection between menstruation and ovulation have lately come under our care, and may not prove uninteresting.

Case 1.—Mrs. L., married six weeks, came to me to learn why her menses did not occur. She had pain in her breasts, some morning sickness, morbid appetite, etc. I, without thinking any possible exception could be taken, suggested the idea of pregnancy, when the patient and mother, who accompanied her, became very indignant, and declared such could not be the case, because the girl, who had previously been perfectly regular, had missed her period a month prior to marriage. No vaginal examination was allowed, and so—though in my own mind I was not satisfied that pregnancy did not exist simply because the period failed to recur one month prior to marriage, and knowing full well that such accidents add materially to the number of seven- and eight-month babies born in early wedlock, I modified, as best I could, the offended parent, and prescribed a simple tonic. Two weeks later the menses appeared, and the young madam told me very triumphantly of my mistake, but her breasts were already showing the changes marking the advance of pregnancy, and six weeks later, exactly four and a half months from the time of the first disappearance prior to marriage of the menstrual flow, quickening occurred. The menses recurred regularly from the time of the reappearance until the eighth month of the pregnancy, when she again missed her period, and exactly at the end of nine months, counting from the date of the first disappearance of the menstrual flow, she was delivered of a fully developed baby. Incidentally I may remark that at the time of labor several convulsions occurred, and for three or four days thereafter the patient lay with widely dilated pupils, perfectly conscious, but perfectly blind.

Case 2.—In the second case, which has now been under observation about four years, the history is briefly this :

Mrs. B., multiparæ, has had five pregnancies, the last of which occurred five years prior to the time of her first coming under our care. At this confinement she says she had a very hard time, and the placenta which was adherent was not removed till the end of twenty-four hours.

Since the beginning of this pregnancy, now five years ago, she has had no appearance of the menses. She is now suffering (at the time of coming under my care) with cervical endometritis, and is quite anæmic. She was given local and general tonic treatment. The cervical catarrh readily yielded to treatment, and the general health was very much improved, but the menses did not appear. The tonic treatment was continued, and every remedy supposed to be of use in the treatment of amenorrhœa was faithfully tried, even the much vaunted permanganate of potash, but without avail. Electricity was not used, because, for many reasons, it was impracticable. At length all efforts to re-establish menstruation were abandoned, and the case regarded as one of early established menopause. Drs. Boismont, Guy, Tilt and others have observed cases in which the menopause was established at ages varying from twenty-one to sixty-one years, and placing my patient in this category, I considered that, at the early age of twenty-seven years, the date of her last menstruation, she had attained the climacteric. She had no further treatment for the amenorrhœa, and I saw nothing more of the patient till sometime during the fall of 1885 she called at my office complaining of debility. After careful examination, I could detect nothing apart from general debility, and so I prescribed a simple tonic, and again the case passed from under my care. Up to this time there had been no show of the menses, and I further add that during the whole progress of the case there has been no evidence of periodical congestion of the pelvic organs, as witnessed by pain in the back and limbs, a sense of fulness in the pelvis, and such other symptoms as are usually present when abortive efforts to menstruate occur. I saw nothing further of the case till about two months ago, when she came to my office to ascertain the cause of the enlargement of her abdomen, which was gradually growing in size. Her general health seemed good, and my father, who examined her, did not hesitate to diagnose a pregnancy. A few weeks subsequent to this visit she fell into premature labor, and I delivered her of a very feeble babe of perhaps six or seven months development, which only lived a few hours. Again, I found the placenta adherent, more perfectly so than in any case I have ever before seen, and it was with the greatest difficulty, and after the most prolonged effort, that I succeeded in tearing, and scraping with my finger-nails, curette fashion, the placental tissues from the fundus of the womb. Even now I do not feel sure that all was removed, and a sharp

attack of metritis, complicated with septicæmia, followed, which well-nigh cost the life of the patient. It must be rare that pregnancy will occur nine years after the menstrual flow ceases, and hence I have thought the case of sufficient interest to report to this Society. Again, as before remarked, nothing could better illustrate the fact that menstruation is not one of the necessary concomitants of ovulation, and *vice versa*.

PARACENTESIS PERICARDII.

By SAMUEL WESTRAY BATTLE, M.D., U. S. N., of Asheville, N. C.

Samuel Reynolds, brickmason, white, aged 60, native of Georgia, admitted to Mission Hospital, Asheville, N. C., July 21, 1886.

Patient is of good physique, fairly well nourished. Gives vague history of rheumatism several years ago. He has been ill for a month, his health generally having failed him. He complains of ill-defined pains in left half of trunk from shoulder to hip, front and rear, but there are no subjective symptoms pointing to the heart or its envelope. Upon inspection the facies is observed to be anxious, the respiration hurried and superficial. Closer examination elicits a much enlarged area of cardiac dulness; heart sounds muffled, distant and feeble; pulse intermittent and barely perceptible at the wrist, at times not at all so; hands and feet cold and a clammy sweat is upon the brow and extremities. Upon consultation with Drs. McGill and W. D. Hilliard, the diagnosis of effusion into the cavity of the pericardium, with imminent heart paralysis, is confirmed, and it is decided to aspirate, and that right quickly. Consent of patient being gained, a valvular incision is made in the skin, in the fifth intercostal space, at a point corresponding to the normal apex beat, this being about the centre of the pyriform tumor made by the distended pericardial sac; a medium-sized aspirating needle, attached to the exhausted graduate, is introduced into the tissues and the stop-cock at once opened, that the fluid may start immediately upon the needle reaching the sac. Straw-colored fluid, to the amount of $17\frac{3}{4}$ oz., is withdrawn with the most gratifying results. The pulse has returned to the wrist, the heart-

sounds, though still muffled, are easily distinguishable the one from the other; the breathing is easier; the whole aspect of the man has changed, and Mars, at least for the nonce, has relaxed his grip. A glass of whiskey and water is ordered, and the following, to be commenced at once:

R. Digitalis tincturæ.....	3j.
Jaborand. ext. fl.....	} āā 5j.
Tongaline	

Sig.—Teaspoonful every four hours.

August 12.—Three weeks have elapsed and there are as yet no signs of reaccumulation of fluid in the pericardial sac. By noon of the day following the exhibition of digitalis, jaborandi and tongaline, nausea and diaphoresis were produced, and the medicine was given less frequently. Two days later, tincture digitalis and fluid extract of *stigmata maïidis* replaced other medicine, and these, in conjunction, are still continued. The heart-sounds have cleared, but are not normal, some degenerative change in the valves and walls having been probably taking place for sometime.

The first sound has lost its booming quality, having become short and valvular like the second, and is now and then intermittent; no indefinable murmurs. Patient is comfortable, sleeps well, breathes easily and naturally, eats well and takes daily exercise without discomfort. In fine, there seems no reason why he should not regain his former moderately good health.

GALEN ON THE TREATMENT OF OBESITY.—“The best method of getting thinner consists in gradually withdrawing from the body that whereof there is superfluity, and in strengthening at the same time those parts which had been expanded. Bodily exercise will undoubtedly prove very advantageous, as we see stout horses getting lean by heavy work. Thus, likewise, those will never grow fat who are obliged continually to toil with hard labor. This, however, requires great precaution, it being certain that fat people frequently run danger of death when attempting violent bodily exercise.” And Galen says: “Regular alvine motions, energetic bodily exercise, a moderate life, a diet which, although satiating, yields but limited nourishment; which explain why Hypocrates advises stout people wishing to grow thin to dine on vegetables cooked with fat, in order that they may become satiated by a small quantity of food.”—*Medical Record*.

SELECTED PAPERS.

DR. BILLINGS' ADDRESS BEFORE THE BRITISH MEDICAL ASSOCIATION — MEDICINE IN THE UNITED STATES AND ITS RELATION TO COÖPERATIVE INVESTIGATION.

Very promptly after its delivery, that is, the day after, the *Boston Medical and Surgical Journal* gave complete the text of Dr. Billings' long-looked for address, and the *Medical Record*, *Medical News* and *New York Medical Journal* the day after, the whole matter having been in type for sometime.

The subject of the address includes several topics upon which Dr. Billings has been long laboring, and in giving to the British profession an insight into the condition of the profession in this country there is no one who could speak with more accuracy and authority. Prefacing his observations with the remark, "As in painting a picture, it is best to locate and define the shadows first and deal with the lights afterwards," he commences with the condition of things complained of by the American physicians: (1) That the profession is over-crowded: (2) "That there are many doctors, both *in esse* and *in posse*, and that this is due to too low a standard of education, and to the want of legal restrictions as to the qualifications which shall give a man the right to practice."

Statistics gathered in 1883 by the Illinois Board of Health showed that in the United States and Canada is one doctor of all sorts to every 600 of population. The proportion varies in different sections. For instance, in Colorado there are 29.3, in Indiana 25.2 to 10,000; while in New Mexico there are only 6.6; in South Carolina 9.2, in North Carolina 9.7 to 10,000. The greatest number of doctors are found in the States west of the Mississippi, where immigration has been greatest, the fewest in the Southern States east of the Mississippi. A fair proportion of doctors to the population is 1 to 1,000, as in England; the true proportion in the United States is 1 to 750.

A map of the United States, constructed to show the degrees of malarial prevalence, is given, to illustrate what the speaker wishes

to enforce as to the question, "Is the standard of education too low?"

"As compared with the North and East, much of this malarious region is a thinly settled country, an almost purely agricultural country, and not a rich country. I need hardly tell you that the physician who has received his chief clinical instruction in the office of his preceptor in Vermont or New Hampshire, supplemented by distant glimpses of a few cases in hospital in Boston or New York, will find himself at a loss at first in dealing with the emergencies of daily practice in Arkansas and Mississippi. He will be subjected to influences which at times are dangerous to one who is not acclimated, and which tend to produce depression of spirits, want of energy and bad health. He will not have free and constant access to scientific companionship, nor be stimulated by the influence of learned societies, and he cannot avail himself of the ordinary sources of amusement, education and rest, such as art galleries, the drama, libraries and museums, etc., which are found in the large cities. Moreover, the pecuniary reward which the practitioner in many of these places can reasonably hope for is comparatively small.

"Taking all these things into consideration, it is clear that if a man, after spending from six to eight years, and from one to two thousand pounds, in acquiring such a general and professional education as it is now considered that a skilled physician should possess, then settles in such a region with the prospect of an average income of from one hundred and fifty to two hundred pounds a year, it is not from pecuniary motives alone. There are such men in such places—men who are not only highly educated and skilled practitioners, but who are also original investigators and thinkers. It was within the limits of this malarial shadow that the foundation of modern gynecology was laid by Marion Sims, of abdominal surgery by McDowell, Battey and Gross, of an important part of the physiology of the nervous system by Campbell. Nevertheless, the rule holds good that malaria and science are antagonistic; the exceptions prove the rule.

"Nor can the inducements for highly educated physicians to settle in thinly settled localities be made stronger by any form of penal or restrictive legislation. Any attempt to fix a standard of requirements or qualifications for practice which shall be the same for such rural districts and for the large cities and manufacturing

towns must result in the adoption of what competent judges would consider so low a standard as to be ridiculous and useless. The demands are widely different, and corresponding differences exist in the sources of supply—that is, in the medical schools.

“There is a class of medical schools in the United States whose object is to give the minimum amount of instruction which will enable a man to commence the practice of medicine without much danger of making such serious and glaring blunders as will be readily detected by the public. There are other schools whose aim and object is to make fairly well trained practitioners, the general character of the instruction given in these being substantially the same as that given in your English hospital medical schools. The results of such a three years’ graded course of instruction in medicine as these schools furnish depend upon the character of the material upon which they work; that is to say, upon the general preliminary education possessed by the student at the time of his matriculation. This is evidently too often defective, and only a few schools have thus far ventured to establish any standard of preliminary examination which at all approaches in its demands that which is required in England. The proverb that it does not pay to give a five-thousand-dollar education to a five-dollar boy is clearly of American origin, and sums up a great deal of experience.

“You have nineteen portals of entrance to the profession, and have not found it easy to keep them all up to the standard. In America we have over eighty gates and a number of turn-stiles, and a good deal of the ground is uninclosed common. Many of our physicians are more or less dissatisfied with this state of things and with the results thereof, and every year in some States efforts are made to secure legislation which it is supposed will protect the interests of the profession, though those who advocate such legislation are usually prudent enough to allege as their only motive a desire for the protection of the public.

“Now, how does this free trade in medicine and the low standard of qualification, or no standard at all, required by law, affect practitioners as individuals? To answer this we must divide the profession into several classes. In the first place, in all our cities, great and small, there is a large class of physicians who are as well educated and as thoroughly competent to practice their art as can be found in the world. They have studied both at home and abroad,

have had extensive clinical training, are always supplied with the latest and best medical literature and the most improved instruments, and many of them are connected with hospitals and medical schools. Among them are found the majority of our writers and teachers, and the successful men are the survivors of a struggle in which there has been keen and incessant competition. These physicians, whose positions are fairly assured, and who, as a rule, have all the practice they desire, are not usually active leaders in movements to secure medical legislation, although they passively assent to such efforts, or at least do not oppose them; and their names may sometimes be found appended to memorials urging such legislation. They are clear-headed, shrewd, "practical" men, who know that their business interests are not specially injured by quacks and ignoramuses; rather the contrary, in fact, for they are called on to repair the damage done by the quack to people who have more money than brains; and they are not inclined to risk the fate of the Mexican donkey who died of '*congojas agemas*'—that is, 'of other people's troubles.'

"Then there is another large class of honest, hard-working practitioners, who rely more on what they call experience and common-sense than on book learning. Many of these have obtained assured positions of respectability and usefulness, and are comparatively indifferent to medical legislation, so far as their own interests are concerned. Others, however, who are not so successful, feel the competition of the local herb doctor or of the travelling quack more keenly, and have more decided views about the importance of diplomas. Among these are the young men who have not yet acquired local fame, and who are apt to become very indignant over the doings of some charlatan in the neighborhood, or some druggist who prescribes over his counter. These last are usually quite clear in their minds that the State ought to interfere and prevent injury to the health of the people.

"I have known two unsuccessful physicians who finally abandoned practice and who gave as a reason for their failure—one that "he did not know enough," and the other that "he had not the manners and tact which would inspire confidence in his patients"; but such frank-speaking men are rare.

"Thus far, as a rule, the efforts which have been made to secure legislation upon medical matters in America have come from the

profession itself, and have been chiefly urged and recommended by physicians. The general public, and even the educated public, has shown very little interest in the matter. It does not demand protection against ignorance, but intrusts the care of its health and the lives of those who are nearest and dearest to it to almost any one who announces himself as prepared to take charge of them. The number of those who profess to practice medicine in the United States and are not qualified to do so is undoubtedly large, though by no means so large as one might suppose after listening to the impassioned eloquence which is duly aired every year upon the subject. There are some advertising charlatans, and travelling quacks are occasionally to be met with, but they are rare."

"Dr. Billings believes that the most important of the first steps is a law like the law of England, requiring that every death in a community shall be registered, and that in such registration satisfactory evidence shall be given as to the cause of death, sufficient, at least, to show that it is not due to a crime. The death certificate is only valid coming from a duly qualified practitioner, therefore compelling the employment of none but legalized doctors."

* * * * *

"So far as the art of medicine is concerned, the demand has much, though by no means all, to do with regulating the quantity and quality of the supply, and there are few localities in the United States where the qualifications of the medical man are not fully up to the standard which the community is able to appreciate and is willing to pay for. In the natural order of things suffering and death are the remedies for ignorance, weakness and vice, and the means of preventing the transmission of these characteristics to offspring. These remedies, though effectual, are drastic, and we do our best to avoid them, but perhaps it is well that the penalties cannot be done away with altogether."

A review then follows of two of the States having a law regulating the practice of medicine, with remarks on the probable outcome of the laws, but the oldest law regulating the practice and its results are not given, as we expected.

* * * * *

"I come now to the consideration of the second part of my subject—namely, the direction or manner in which we have reason to hope that medicine will be developed in the United States, and the

kind of co-operation which you may reasonably expect to receive from the medical profession of that country. A marked feature of the present day, in medicine as in other things, is the tendency to specialization in study and in practice. But this very development of specialties, of increasing minuteness in the division of labor, increases the necessity for co-operation, and in fact tends to create what we may call the specialty of co-operation. Formerly a rifle, or a watch, was made by a single workman. No two instruments were exactly alike; each had its own individuality and was not interchangeable, and the cost of the whole was such as to put it beyond the reach of the multitude. Now the work on these things is greatly subdivided; one man makes only one small wheel, or spring, or pinion, and another another, each doing his work, according to a uniform pattern, rapidly, perfectly, and at comparatively small cost. But, in addition to the workmen who make the individual parts, it is now necessary to have one person specially skilled in making drawings and preparing patterns, another to assemble the completed parts, and a third to test the whole after it has been put together. As the centrifugal force increases the centripetal power must also increase.

"In one sense medicine, as we have it to-day, is the result of co-operation, not of deliberate, centrally planned and direct co-operation, but of natural selection from results produced by many men, often working at cross purposes, and, therefore, wasting much energy, but nevertheless working, though blindly, to a common end. And it is safe to predict that in the future much of the best work will be done in the same way, by individual effort inspired by the love of science, by personal ambition, etc. But the results obtained in this way come slowly, and some things that we want can hardly be obtained by individual effort, even if we were willing to wait; hence we must look to organization for help.

"This is an age of machinery, of exchanges, of corporations, for all these correspond to one and the same fundamental idea. Men make machines to do what the individual cannot do, and they make them not only of brass and iron, but of men, for such an obvious source of power to the man or men who can master the combination is not likely to be overlooked. One result of such organization is seen in our encyclopædic works on medicine, whether these be called dictionaries or hand-books; another is the great

medical journals; another in associations which seek to wield political influence; another in the comparatively recent attempt at collective investigation of disease. With these may be classed also the attempts of government departments to make scientific investigations, to collect libraries and museums, to do things which require long continuity of effort on a definite plan in order to produce the best results. And it is by the combination of all these, with the efforts of individual workers, that substantial advance and improvement are to be effected. In this broader view of co-operation it is interesting to consider those fields of labor to which comparatively few physicians can devote themselves because of want of time and opportunity, but whose proper working is, nevertheless, of the greatest importance to the practitioner.

“One of these is experimental laboratory work, and in this direction the prospect of valuable contributions from America is now exceedingly good. Some of the wisest of our most wealthy men have shown their appreciation of the responsibilities which riches entail on their possessors by seeking new channels through which to benefit their fellow-men. While the old and well-known methods of endowing hospitals and charitable institutions are not neglected, there is apparently an increasing tendency to endeavor to promote the advancement of knowledge, and especially of such knowledge as tends to the mitigation of suffering and the improvement of the race, to furnish means for the investigation of disease, to provide laboratories, and to endow medical schools, and thus place them beyond the reach of the temptations and difficulties which must always exist when such schools are dependent upon the fees of students, and are, therefore, practically commercial manufacturing establishments.”—*New York Medical Journal*.

A SIGN OF DEATH.—M. Lessenne, at a meeting of the Société Médicale d'Amiens, pointed out the following simple and trustworthy sign of death. After pricking the skin with a needle the puncture remains open, just as when a piece of leather is pricked. On the living body, even if the blood does not come to the surface, as would happen if the person were hysterical, the pin-prick closes at once, and does not leave the slightest trace.—*Medical News*.

INTUBATION OF THE LARYNX.

It may not be out of place to again give the methods employed and this procedure as recommended by Dr. Ingalls :

The child should be wrapped in a sheet or shawl, which will pinion the arms, and then held upright in the nurse's lap ; an assistant holds the child's head. The gag is then introduced between the jaws, and opened as wide as need be, but not with great force. Dr. O'Dwyer says that it is unnecessary to use the gag with infants who have not back teeth. The physician, sitting in front of the patient, passes his left index finger over the base of the tongue and down behind the epiglottis, and with it guides the end of the tube into the glottis. The handle of the applicator should be held near the child's sternum until the end of the tube has reached the pharyngeal wall, when the handle is rapidly elevated, and the tube directed downward and forward along the index finger into the larynx. This will not be found difficult, but the infant's epiglottis is so small and flaccid, that the operator may not be able to recognize it, though he will have no difficulty in recognizing the larynx as a whole, which, except that it is slightly irregular, feels much like the end of one's little finger. The operator should not expect to detect the opening of the glottis, but must be guided by his anatomical knowledge to pass the tube into the centre of the larynx. Unless he is careful to carry the handle of his instrument high, and thus bring the tube as far forward towards the base of the tongue as possible, the tube will pass into the œsophagus. While it is desirable to accomplish this portion of the operation as quickly as possible, it should not be done with too great haste. Ten or twenty seconds, which is a long time for this portion of the operation, may be taken without danger. If the tube is not then introduced, it should be removed for a minute or two, to allow the child to breathe, and then the operation may be repeated ; but if the tube seems to be in the proper position, whether the operator is certain of it or not, the slide upon the handle should be crowded forward, so as to disengage the obturator, which is then withdrawn. Some cough will occur at once, and, if the tube has not been inserted into the larynx, or if it has not been passed down so that the rim rests on the vocal cords, it is likely to be expelled, and may be seen or felt

in the back part of the mouth. If the tube has been properly inserted, respiration will become easier, and after a few minutes the operator cuts one end of the silk thread, passes his finger behind the epiglottis, and holds the tube while the thread is withdrawn.—*Therapeutic Gazette.*

THE DESTRUCTIVE ENERGY OF THE TINCTURE OF THE CHLORIDE OF IRON ON THE TEETH.

An original paper of conspicuous merit, with the above title, was read before the Odontological Society of the State of New York, in June, by George W. Weld, MD., D.D.S.

As the researches of Dr. Weld in this direction possess many points worthy of the careful consideration of every physician, the salient features of the paper are presented to our readers.

Dr. Weld declares that the clinical operation shows that water increases the destructive energy of the tincture of the chloride of iron upon the enamel of the teeth more than any other fluid, and, as an illustration, he states that the effect of adding water to a simple solution of the chloride of iron, *devoid of free acid*, is to give basic salts of iron and the separation of free hydrochloric acid.

Dr. Weld showed conclusively that the tincture of the chloride of iron of officinal strength had but little, if any, effect upon the enamel structure of a tooth when immersed in the same for a period of twelve hours; but that, when immersed in a solution of the tincture and water, in proportion of one ounce of water to one drachm of the tincture, the enamel was materially injured in five minutes.

As an illustration of this phenomenon the doctor stated that when a piece of zinc is immersed in strong sulphuric acid (H_2SO_4) it has been observed that the acid has no effect upon the structure of the zinc, but if a little water be added to the acid, the zinc is at once destroyed; so that it is not entirely a matter of the strength of the fluids, so far as the quantity of iron or acid is concerned, but a matter of construction or solubility. The zinc in the strong sulphuric acid is protected in the same manner that the tooth which is immersed in the strong tincture of chloride of iron is protected, viz: the surface is blocked up with the basic salts of iron insoluble in alcohol, which

prevents chemical action. In the case of the zinc, it is the sulphate of zinc resulting from the first action, and insoluble in the concentrated acid, that forms a protecting coat over the surface of the zinc; the addition of water dissolves this protecting sulphate, and renders further chemical action possible. In the case of a tooth immersed in a strong solution of the tincture a similar action takes place, viz: the oxide of iron first formed protects the enamel from immediate chemical action on account of its compact adherence to its surface.

To illustrate still further, Dr. Weld called attention to two specimens of teeth on the card which had been immersed in the tincture and alcohol, and compared them with teeth which had been immersed with the tincture and water. Here it was observed that, although the alcoholic solution used contained the same quantity of the tincture and possessed apparently the same relative strength, and the teeth immersed for the same length of time, yet no injurious effect was produced on their lime salts. The reason is attributed to the fact that alcohol is a dehydrating compound, and the peroxide which is formed in the alcoholic solution is of the anhydrous form, and in character very compact, adhering closely to the surface of the tooth, thereby preventing immediate chemical action, while on the other hand, in the presence of water, the peroxide, which is precipitated in the hydrated form and is flocculent in character, does not so well adhere to the surface of the tooth, leaving the free hydrochloric acid in the solution to unite with the lime salts with greater facility.

There appears, then, to be two forms of peroxide of iron, viz: 1, The hydrated form ($\text{Fe}_2(\text{OH})_6$), found in the water solution, which is flocculent and non-protecting to the teeth; 2, The anhydrous form (Fe_2O_2), formed in the alcoholic solution, which is heavy and compact, and protects the surface of the teeth. The following formula will show how the hydrated peroxide is formed from the anhydrous peroxide ($\text{Fe}_2\text{O}_3 + 3\text{H}_2\text{O} = \text{Fe}^2(\text{OH})_6$).

Synonyms: Ferric hydroxide.

Hydrated sesquioxide of iron.

The teeth immersed in an ounce of the elixir of the pyrophosphate of iron, with one drachm of the tincture of the chloride added, for a period of twenty-four hours, produced apparently no chemical effect on the enamel; but with the same quantity of water and the tincture the enamel was completely destroyed. The elixirs are composed of

nearly twenty-five per cent. of alcohol, the presence of which, as observed in the strong solution of the tincture and in the alcoholic solution, affords a protection to the enamel of the teeth in the manner described. But it is to be noted that when a tooth is immersed in a solution of the tincture and simple syrup, in the above proportions, The enamel is but little affected. This is due to a mechanical reason. or a condition of fluidity of the solution, i. e., the presence of the sugar in solution coats the surface of the enamel, preventing the chemical affinity between the acid, or perchloride of iron, and the lime salts in the teeth.

The manner in which syrup modifies the destructive energy of the tincture on the enamel was beautifully illustrated by the effect produced on the specimens of teeth which had been immersed in three different weak solutions of phosphoric acid. Two of these were proprietary medicines and contained water, and the effect was to injure the enamel of a tooth in one hour, while the third, a syrup solution (each fluid drachm containing two grains of free phosphoric acid), produced but little, if any, injurious effect on the enamel in twenty-four hours.

Equally interesting was the effect produced on the enamel of teeth which had been immersed in a solution of the tincture and the weak alkaline waters (notably Vichy).

When a drachm of the tincture is added to an ounce of the Vichy water, a slight effervescence occurs, indicating that the bicarbonate of soda contained in the water has neutralized a part of the free acid contained in the tincture; in consequence, when a tooth is immersed in such a solution, the destructive energy of the iron is, to a great extent, modified. Unless the specific nature of the tincture of the chloride of iron is materially affected (and the peculiar odor of the tincture remains), there seems to be no reason why this preparation of iron, at least in all cases of anæmia, should not be administered in combination with Vichy water.

There are then, three *menstrua* which may be employed to modify the destructive energy of the tincture of the chloride of iron on the enamel of the human teeth. The first is alcohol in some form. The second is Vichy water, which neutralizes to a slight extent the free acid contained in the iron. And the third is some form of an elixir or simple syrup.-- *Medical Record*.

THE DETECTION OF CHRONIC BRIGHT'S DISEASE.

By CHARLES W. DULLES, M.D., Surgeon to Out-patients in the
Hospital of the University of Pennsylvania, and in the
Presbyterian Hospital in Philadelphia.

In January, 1884, a gentleman came to consult me on account of a sense of constriction and oppression which he felt in the lower zone of the thorax, and some dyspnœa, which affected him chiefly when he walked in the morning to the car which conveyed him to the place where he exercised his duties. He was a man with important responsibilities, past middle life, rather stout, of medium height, of excellent habits, but whose duties interfered with his midday meal and required him to sit for five or six hours every day in a crowded and ill-ventilated room. The point in regard to his case to which I wish to call attention does not require further description of his condition and symptoms, except to say that he had never known of having any œdema of the feet or other cause to suspect his kidneys. On making a physical examination of his thoracic and abdominal organs, I found no sign of any disorder except a loud, ringing or booming second sound of the heart, which my experience has led me to regard as of peculiar significance. This sound is simulated by that which is heard when one presses the palm of his hand pretty firmly against his own ear, and at the same time taps the back of his head with his forefinger. This sound, heard over the heart, has seemed to me to be characteristic of a moderate degree of essential hypertrophy of this organ. Hearing it in the case I am describing, I thought it important to examine the patient's urine. This I did most carefully and thoroughly. I found it normal in amount, color, clearness, sediment and odor. Its reaction was strongly acid, its specific gravity 1.020; the urates were normal; uric acid was in excess; the phosphates were normal; no albumen was found, and no sugar. By a microscopical examination, after forty-eight hours settling, I found various forms of uric acid crystals, a few small plugs of small white cells, and a *very few delicate hyaline casts*. I gave my patient a cautiously worded diagnosis, advising careful living, and instituted treatment which relieved his symptoms. Becoming

deeply concerned about himself, however, he now, with full approbation, consulted the gentleman who had before been his medical adviser. The latter examined him, and said that his heart was perfectly healthy, and that an examination of his urine showed it to be normal. Not quite reassured by this, the gentleman consulted three other eminent medical men; one of whom said he had a fatty heart, while two of them said his heart was sound. One of the latter, who also said that his kidneys were perfectly healthy, had him under treatment for a long time, giving him chiefly Fowler's solution of nitroglycerine. A prolonged absence from work, with travel and carefully regulated diet, contributed to making the patient feel decidedly improved. After the lapse of two years and a half, he came to me again on July 3, 1886, asking me to examine his urine, so that he might select an appropriate medicinal spring, at which he should spend his summer vacation.

The circumstances which I have narrated made this visit one of peculiar interest to me, and the examination of the patient's urine equally interesting. Again I found the amount, color, clearness and sediment normal, while the odor was not pleasant. The reaction was acid, and the specific gravity 1,024. The urates were normal, the phosphates were doubled. On testing by boiling the filtered urine, and by applying the nitric acid test in the ingenious manner suggested by Dr. Thomas S. K. Morton, in the *Medical News*, May 8, 1886, I failed to discover any evidence of the presence of albumen. But on testing it with the potassio-mercuric iodide and citric acid paper of Dr. Oliver, of Harrogate, England (with some papers which I received directly from him), I did find a distinct trace of albumen. I found no sugar in the urine, and no other abnormality except a slight excess of coloring matters. After twenty-four hours, and again after forty-eight hours, I made a microscopical examination, and found hyaline tube casts, one young epithelium cell, various forms of uric acid, oxalate of calcium crystals, and several varieties of microorganisms.

Fig. 1 represents what was found under a single cover-glass, although all these objects were not seen in any one field of the microscope: Hyaline tube casts—one so-called waxy casts; uric acid in various forms; young epithelium cells; oxalate of calcium; micrococci and bacilli.

It is seen, then, that what I discovered at this last examination

corresponds with what I found two years and a half ago; and I think it corroborates the diagnosis I then made of chronic Bright's disease, associated with a moderate degree of essential hypertrophy of the heart, or *vice versa*.

The interest of this case hinges upon the diagnosis and the ground upon which it rested. As to the heart, the diagnosis rested upon the peculiar sound described above, which has never, I think, deceived me. But the diagnosis was, in my opinion, supported by what I found in the urine, and the inference which it warranted. The discovery of the tube casts, which escaped another, and perhaps several examiners, may have been due to the method of examination which I employ, and it is chiefly to call attention to this that the account of the present case is published.

In the first case I am strongly impressed with the advantage of allowing the sedimentation of a specimen to take place in a straight glass, and not in a conical one, as is recommended in most of the books. In the latter, I think, one may easily miss a few tube casts, because they are not heavy enough to resist the attraction and friction of the sides of a conical glass, and so never find their way to the bottom. For this purpose a test-tube with a foot, I think, is the best receptacle.

Another point to which I desire to call attention is the plan I have devised for catching a specimen of sediment for microscopical examination when the deposit is very slight. After leaving the urine to settle in a test-tube with a foot for twenty-four hours, under a paper cover pressed down upon and around the top of the tube, I take a long, pointed glass tube, close the upper end firmly with my finger, and, pushing the point through the centre of the paper cover of the test-tube, thrust it steadily to the bottom of the urine. I now remove my finger, and the bottom layer of the urine, containing the deposit of twenty-four hours, flows up into the long tube. When it has risen to the level of the urine in the test-tube, I carefully twist a piece of soft paper over the upper end of the second tube, or stuff a small bit of absorbent cotton into it, to keep out all foreign substances, and allow the apparatus to stand undisturbed for twenty-four hours or longer, during which the deposit contained in the column of sediment falls to the bottom of the smaller tube. At the end of this time I close the upper end of the smaller tube firmly with a

finger, withdraw it carefully from the test-tube, and then allow the two or three drops nearest its point to run out on a slide, in two or three places, cover them properly with thin glass, and put them under the microscope.

In this way, I believe, one may obtain a most typical specimen of the deposit, and I think the adoption of this method might prevent such a conflict of opinion as took place in the case I have described, or such an occurrence as is mentioned by Dr. Roberts in his work on "Urinary and Renal Diseases," fourth edition, p. 439, in which he discovered hyaline casts in a urine which had been repeatedly examined with negative results by two medical men well accustomed to such examinations.

It is in the cases in which it is difficult to determine the existence of chronic Bright's disease that it is often most important to be aware of its presence. Many obscure symptoms become intelligible when this factor is recognized and taken into account, and it is often possible to put a patient on his guard against dangers which would not be considerable if the kidneys were in perfect condition. I am aware that there is often unnecessary alarm felt both by the patient and by his physician upon the discovery of a chronic disorder of the kidneys; and I would not like to contribute to any increase of the already exaggerated dread of Bright's disease. But if such a condition is present, it cannot be doubted that it would be for the advantage of both in most cases to have it known; and so I hope that the simple suggestion which I here make may prove of value.—*Medical News*.

INTEMPERANCE AND INSANITY IN THE NEGRO.—* * * In a word, it is impossible to estimate the evils that intemperance has brought upon the negro, and it is an incontrovertible fact, sustained by the irresistible proofs of daily observations, that it has been one of his greatest curses. All observers agree that intemperance is intimately connected with, and is one of the main exciting causes of, in all races, and this is especially true of the negro, and, as its evil effects are handed down to succeeding generations, we can but expect his progenitors to be heirs to alcoholism, idiocy or hereditary insanity. The negro is naturally intemperate, and, unrestrained, indulges every appetite too freely, whether for food, drink, tobacco or sensual pleasures, and sometimes to such an extent as to appear more of a brute than human. The gratification of these appetites has enervated him, and, from leading an active and useful life, many have become indolent, lazy, trifling vagabonds, a curse to the country and a burden to the State.—*New York Medical Journal*.

TREATMENT OF EPILEPSY.

Wildermuth, in the course of a long career at the head of an institution devoted to epileptics, has had occasion to make trial of all remedies of reputed value in epilepsy, and has finally concluded that the treatment by bromides is indicated in the majority of cases.

In combating epilepsy, or, more properly speaking, the epileptic state, Wildermuth exhibits the bromide of potassium in the initial dose of thirty grains in children and seventy-five grains in adults. The dose is gradually augmented to one hundred and twenty grains, and, very rarely, to one hundred and fifty grains.

The bromide is given in water or milk, and its exhibition is followed by physical exercise, in order to decrease the likelihood of resultant gastralgia.

Iodides and chlorides are badly borne.

When medication is suspended, it is advised that the doses be gradually and slowly decreased.

The treatment may produce disagreeable consequences, which should be met more than half-way. The dental and gingival alterations are prevented by gargles of potassium permanganate, and cutaneous eruptions by the daily administration of Fowler's solution, lukewarm baths, and inunctions of Hebra's ointment. With this ointment, also, the eruptions of bromism are treated when they appear, and when they are very rebellious, he does not hesitate to use the sharp curette.

The circulatory troubles incident to the bromine treatment necessitate cessation of the medicament, administration of coffee, shower-baths to the spine, and massage of the limbs.

When patients are very susceptible to the pure bromide of potassium, the daily ingestion of a wine-bottle or less of Erlenmayer's "bromized water" is to be preferred. The formula of this is as follows :

Potassium bromide,	
Sodium bromide.....	ââ gr. lx.
Ammonium bromide.....	gr. xxx.
Liquor ammonia.....	gt. j.
Carbonated water.....	f 3 xx.

In recent cases and in adolescents Wildermuth employs a somewhat smaller dose of the bromides, and adds one-tenth to one-thirty-third of a grain of atropine sulphate. In desperate cases he has used the osmate of potassium, in doses of from one-seventieth of a grain to one-fourth of a grain, together with zinc oxide, according to the method of Herp.

He has seen no benefit from the use of curare or absinthe. The continuous current is chiefly of advantage in combating choreiform manifestations; the anode applied to the sternum, and the cathode to the spine. In subduing the psychical excitement, hydrotherapeutic methods have proven most useful; especially the moist pack and massage, gave favorable results in cases in which somnolence was very pronounced.

The dietetic regimen consists in the moderate use of meats, avoidance of spices, sobriety and abstinence from tea and coffee.

The treatment of the access appears useless when the crises succeed each other rapidly. If they are more rare, he tries the wet pack, ice to the head, and a double or triple dose of bromide. Chloroform is discarded as unsafe, and chloral is reserved to combat the excitement in the intervals of the access. In cases where arrest of the heart is threatened, he commends the subcutaneous injection, in the thoracic region, of camphorated oil, up to the maximum dose of two fluidounces.—*Gazette Hebdomadaire de Médecine et de Chirurgie*—*Medical News*.

KRULL'S METHOD OF TREATING CATARRHAL JAUNDICE.—M. R. Longuet gives an account of this treatment and of Löwenthal's confirmation of its efficacy. It seems that Krull published an account of his method in 1877, but that it excited little attention until Löwenthal took it up. It consists simply in the administration of enemata of cold water; the first injection, of one or two quarts, at a temperature of 59° F., is thrown in gently and retained as long as possible; on the succeeding days an enema is given every morning, the temperature being gradually increased to 71.6° F., which is not exceeded. The cure is generally accomplished by the fourth day, and in no instance have more than seven injections been found necessary. No failures have been mentioned, although several of the cases were of long standing and had resisted the most varied treatment, including the use of that *ultima ratio* of the Germans, Carlsbad water. No medicine is allowed to be taken, and the diet is restricted to vegetables. Löwenthal who used injections somewhat colder than those mentioned, tried the method in forty-one cases, and he absolutely confirms Krull's report of its efficiency.—*New York Medical Journal*.

THE LATE DR. ELLSWORTH ELIOT HUNT.

To the Editor of the New York Medical Journal:

SIR:—Please announce to the profession the death of Dr. Hunt, son of Dr. Ezra M. Hunt, of Metuchen, more recently of Trenton, N. J. The deceased was born in Metuchen, May 15, 1855, and died August 17, 1886, at Pensacola, Florida, of phthisis. He was educated at Phillips Andover Academy and Princeton College, from which he was graduated in 1875, taking the second honor and delivering the Latin salutatory. During his sophomore year he took the Stenike prize in languages, being the first to receive it. He was also accounted as good a mathematician as the class contained, but he did not contend for the prize in that branch. In his senior year, as the result of a written examination, he secured the fellowship in experimental sciences, which entitled him to a year of post-graduate study at Princeton or abroad. He chose to remain at Princeton, and there studied during the year, distinguishing himself in physics. He was graduated in medicine from the College of Physicians and Surgeons, of New York, with the third honor, in 1878. During his course there he was clinical assistant to Dr. Alonzo Clark. Having finished the usual term of service on the house staff of the Roosevelt Hospital, he went to Vienna, where he studied surgical specialties till he seemed to have rounded his course of study to the utmost. In the autumn of 1882 Dr. Hunt opened an office in Lexington Avenue, New York. After a little more than a half year from the beginning of his practice he was seized with acute tuberculosis. He returned to his father's home and spent his three remaining years seeking health at home and in Pensacola, Florida. He was buried in Metuchen August 21st.

He inherited a disposition to tuberculosis through two generations, and to those who saw him only casually he might, from his pale face, slender figure and slight stoop, have seemed not to be strong. To those who saw him month after month accomplishing huge tasks, noted his quick, elastic step, his tireless energy, his never-failing appetite, buoyant spirits and hopefulness, he must have seemed blessed with the unmistakable signs of health. He regarded himself as perfectly healthy till he caught the first crimson stain on his handkerchief.

The preceding record tells its own story. To say that a student in one of Princeton's classes has taken a prize in languages, has stood among the first in mathematics, and taken a fellowship in sciences, is to designate an intellect both brilliant and broad, to point to a man without peer in a thousand of his fellows. His breadth in scholarship was quite equaled by his breadth in general information. He seemed never to have forgotten a college study. He was without vices; he was a devoted son and brother. He selected few intimate friends, and to them alone did he show his true nature. The intimate associates and friends of Dr. Hunt desire to put before the profession a brief record of this brilliant and gifted student, this clean, cultivated, intellectual, Christian gentleman, and allow them to lament with us the loss we have sustained.

Yours,

W. P. NORTHRUP.


A CASE OF RE-INJECTION OF BLOOD DURING AMPUTATION AT THE HIP-JOINT, WITH RAPID RECOVERY.—By A. G. Miller, M.D., Edinburgh. In a case of strumous disease affecting both hips, the left knee and the left elbow, with a large abscess connected with the left hip, the patient being in very feeble condition, amputation at the latter joint became necessary. The limb having been exsanguinated to the middle of the thigh, and a powerful elastic tourniquet applied at the groin, a rapid circular cut was made right down to the bone in the upper part of the thigh, the femur sawn through, the femoral artery and some smaller vessels tied, and the tourniquet removed; some hæmorrhage still occurring from a few small vessels, they were also ligatured. All the blood which escaped, both from the femoral artery and the smaller vessels, amounting to eleven ounces, was caught in a vessel containing a solution of phosphate of soda and re-injected into the deep femoral vein. By an incision on the outer side of the thigh the head of the femur was then dissected out. The wound was dressed antiseptically. The patient suffered no shock whatever, nor depression of temperature after the operation. For the first few days he was flushed and had a fuller pulse than before the operation, but he had no rise of temperature. The weakness and the anæmia of the patient, together with the increased vascularity of the parts due to the disease, rendered it very likely that he would not have survived the operation, had not the greater part of the blood lost been re-injected—the fact being that from the exsanguification of the leg, together with the reinfusion, there was probably an ultimate gain of blood after the operation.—*Edinburgh Medical Journal—Annals of Surgery.*

EDITORIAL.

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THOMAS F. WOOD, M. D., Wilmington, N. C.,	} Editors.
GEO. GILLET T THOMAS, M. D., “	

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE MESSAGE OF PRESIDENT GRAHAM AND ITS SUGGESTIONS.

We have sent out to our readers the full text of the President's Message to the State Society at New Berne, and we would ask that special attention should be given to his recommendations. If every physician in the State, outside of the membership of the Society and those who are on its rolls, but do not participate in its work, would read carefully his suggestions concerning the necessity for harmonious organization for effecting any great improvement in the medical profession in the State, it will serve as an incentive to both of the classes of physicians whom we have mentioned above to join with the now active workers in the labors of their Society. It is useless to repeat again the arguments for the reasonableness of the suggestion. For to the Medical Society is due the credit of the

origin and growth of the Board of Medical Examiners and the benefits which the law empowering this Board to act is bringing to regular practitioners in the State. The fostering care of the Society for the Board of Health has added a valuable element in the general police department of the State—and, although an outcome of the Society, and elected for the use of the State government, and therefore no longer a servant of its originators, it comes yearly back to report its progress and receive from its promoters such suggestions as may be deemed wise for its further advancement and usefulness. Protection of any sort must be the result of united action where the interests of so many are involved and the end to be attained a common one—and it will only be at the present possible for the profession in the State to find a rallying nucleus in the organization which we represent, and whose record has been so satisfying. If the profession of the State is ever to reach the place in general esteem which its intrinsic worth entitles it to hold, it must set aside the inaction or modesty which have kept down the light which should have shone out from our midst. We can only let our deeds be known by telling them. There is no lack of ability to recount the experiences and deductions which intelligent physicians are constantly gathering in our State, but there is lack of habit, both of making bed-side record of disease and of publishing well-digested summaries of these clinical studies.

The JOURNAL will always welcome these matters, assured that they will be of interest to our readers, and of statistical value. We do not think it necessary for physicians to wait always for unique cases of sickness or exceptional cases of surgery before offering themselves as contributors to the literature of the profession. For many of them will find that a short experience in careful note-making at the bed-side will lead them surely to such a collection of material that the demand for publishing them will be almost positive. It will be germane to the idea upon which we base our claims for the excellence of the physicians in North Carolina to recall the declaration of Marshall Hall, after he had made a visit to the United States and travelled as far South as Charleston investigating men and manners, as well as pursuing vigorously his special studies in the physiology of the nervous system. He said on his return to England if he was seriously sick, or injured, he would place as much confidence for relief in the country doctors he met

in America, self-reliant and self-sufficient in great emergencies, as in any man he had ever seen in the great center of learning.

Some of the country doctors were in North Carolina, and these same characteristics still mark them; but their good works are hidden away under the shadow of their modesty. Let us hear from these gentlemen. We would enjoin on those not already of us, to visit the next annual meeting of the Society and investigate its work, assured that they will be glad, upon examination, to partake of the labors and benefits of the organization, and let us all seek to enlarge our usefulness by these annual consultations, and more frequent resort to the publication of our experiences. There are other points in this Message to which we shall return at a later day.

AILANTUS TREE AND ITS ENEMIES.

The newspapers and sanitary and medical journals have begun a crusade on the ailantus tree, some claiming it to be a deadly poison. This tree has had its ups and downs since it was introduced into this country as a desirable shade-tree under the name of "trees of Heaven." Long experience with it has caused the public to pronounce against it as a desirable shade-tree, where elms, oaks, limes, pride of China, and other trees will grow as easily. It is so readily propagated by seed and off-shoots that it soon runs riot in the streets, its roots penetrating wells and uplifting side-walks. Although the trees are not perfectly diœcious, the pistillate and staminate flowers are borne on different trees. The staminate flowers exhale an unpleasant odor in sultry weather, but no part of the tree is poisonous, and the worst that can be said of the odor of the flowers is that it is offensive to the nostrils of most persons. The tree is of rapid growth, is a good drainer of the soil, and its leaves exhale oxygen with as true a function as the more desirable oaks and elms. Therefore, in condemning the ailantus, let it not be on the unproven ground of poisonous properties, but because in comparison with other trees it is not so desirable.

In one point of view, not connected with hygiene particularly, it is a most valuable tree. It will grow in a very poor soil. In treeless, barren districts this tree can be utilized by planting on the borders of enclosed areas, to afford protection for more desirable trees within. Furthermore, the ailantus is free from insects, and furnishes very good cabinet wood.

REVIEWS AND BOOK NOTICES.

A SYSTEM OF PRACTICAL MEDICINE. By American Authors. Edited by WM. PEPPER, LL.D., M.D., assisted by LOUIS STARR, M.D. Vol. V. Diseases of the Nervine System. Lea Brothers & Co., Philadelphia, 1886.

The editor, with commendable pride, offers to the reader a short valedictory with this, the final volume of his splendid work. The work was set on foot in 1881, and the first volume issued in January, 1885. The number of articles is 185, written by 99 authors, with the indexes, covering nearly 5,600 pages.

The feeling of proud satisfaction with which the American profession sees this, its representative system of practical medicine issued to the medical world, is fully justified by the superior character of the work. The entire caste of the system is in keeping with the best thoughts of the leaders and followers of our home school of medicine, and the combination of the scientific study of disease and the practical application of exact and experimental knowledge to the treatment of human maladies makes every one of us share the pride which has welcomed Dr. Pepper's labors. More compact than Zeimssen, and sheared of the prolixity that wearies the readers after the German school, the contributors of all the articles have gleaned these same fields for all that was valuable. Of the same size as Reynolds, representing the English practice—it is better, both as it stands in the place of a new edition to that work and a supplemented in its superiority, so far as we are concerned, by the fact that it is the outcome of American brains, and is marked throughout by much of the sturdy independence of thought and originality that is a national characteristic. Yet nowhere is there lack of study of the most advanced views of the day; nor can this volume fail to stand as a text-book of authority for years to come.

The work opens with a chapter by Dr. E. C. Seguin on "The General Semieology of Diseases of the Nervous System; Data of Diagnoses," and is followed by an article on "The Localization of Lesions in the Nervous System," by the same author. The former of these articles the authors divide into Studies of Psychic, Sensory,

Motory and Trophic Symptoms, with wood-cut illustrations, and sums up his conclusions by "The Principles of Diagnosis," from the foregoing data.

In his exposition of "The Localization of Lesions in the Nervous System," he prefers to present "the association of symptoms with definite lesions, with occasional anatomical and physiological explanations," being in fact a concise and classified series of diagnostic propositions, because the length allotted his chapters in a system of practice will not allow him to detail all the research, anatomical and physiological, which has been made to prove the organic independence and function of the nervous system, or to classify the autopsical work proving localization.

The article is subdivided into five parts, relating to localizations of lesions of the (1) peripheral nervous system; (2) the spinal cord; (3) medulla oblongata; (4) the encephalon; and (5) cranio-cerebral topography. The whole article is well illustrated.

Dr. Charles F. Folsom contributes a notable article on "Mental Diseases," which includes the whole general study of insanity, and is the production of a master.

Dr. Charles K. Mills has added a valuable series of articles to this on "Hysteria," "Hystero-Epilepsy," "Catalepsy," "Ecstasy," and later on, "Progressive Unilateral Facial Atrophy," and "Tumors of the Brain and its Envelopes."

Dr. H. C. Wood has done the reading and thinking portion of the profession a service by his exposition of "Neurasthenia," which he says is not a distinct disease, but a condition of the body, so constantly is it associated with various chronic morbid states. The article is short, concise and very valuable, to which he has added another article on "Acute Affections Produced by Exposure to Heat," which is worthy of its author.

"Sleep and its Disorders," including the Study of the Phenomena of Dreams, Night Terrors, Somnambulism and Hypnotism, Insomnia, Coma, Sleeping Dropsy, Lethargy and Apparent Death, is the chapter with a full account of the matter under investigation, by Dr. Henry A. Lyman.

Dr. Wharton Sinkler writes up "Headache," "Tremor," "Chorea," and "Athetosis." His article on chorea is the most important of these, and is a well studied chapter on this disease, which is so interesting. His personal knowledge of the malady, derived from his cases in

the Infirmary for Nervous Diseases, makes his opinions the more reliable, and his acquaintance and free use of recognized authorities embellish the whole chapter.

The most interesting chapter in the book to us is the one on "Alcoholism," by Dr. James C. Wilson. This disease, in its acute and chronic forms, is so unfortunately frequent and such a plague to the physician, that this explication of the matter will be of immediate and constant value. He has divided alcoholism into acute, chronic and hereditary, and dipsomaniac: (1) Ordinary or typical forms; (2) irregular; (3) acute poisoning by alcohol, and lethal doses. The chronic form includes visceral derangements, derangements of the nervous system and psychical disorderings.

"Rum," says the author, "is at once the refuge and snare of want, destitution and sorrow," and is the great cause of crime among the ignorant and vicious. Therefore moral and social influences, example, occupation and the lack of it, are to be considered among the causes of the disease under discussion. "The occasional moderate use of alcohol in the form of wine with food," says Dr. Wilson, "and as a source of social pleasure, is not fraught with the moral or physical evil attributed to it by many earnest and sincere persons." Its temperate use in this form, and under proper circumstances, *with food*, in the majority of individuals, is attended with benefit. Of the unfavorable conditions which set up a predisposition to alcoholism, our author ranks *heredity* first.

Then he puts in order various forms of disease, bodily weakness and chronic morbid states, irregularity of sexual functions, the abuse of tobacco, depressing mental influences and habit, as the more prominent of the causes that lead to inordinate use of alcohol. In discussing habit, as a cause, among active business men, its importance cannot be overestimated.

Fothergill, in speaking of the habit of taking alcoholic stimulants at a fixed hour every day, quoting Dr. Samuel Wilks, says: "The man or woman who has an acute consciousness of the hour of eleven is a being both physically and morally lost."

Th various forms of alcoholic beverages are rapidly reviewed and their comparative value for good or evil estimated, after which the physiological action of alcohol is taken up, which involves the discussion of its therapeutie value.

The interesting and most important portion of this contribution,

however, is the pathology of alcoholism and its treatment. It is too extended for review in our space, but to those of our readers who have so often appealed with satisfying responses to the works of Anstie on this subject, Dr. Wilson's contribution in this System will be most welcome, as it is replete with all the knowledge which Anstie possessed, and brought with precision down to the present day in its details.

To this article he has added two others, "The Opium Habit and Kindred Affections," and "Chronic Lead Poisoning."

Dr. Allen McL. Hamilton contributes "Local Convulsive Disorder" and "Epilepsy;" and "Tetanus" is from the pen of Dr. P. S. Conner. But we must not attempt further to set forth the contents of this volume. The five volumes will long be the source of information to which confident appeal can be addressed, and it behooves every practitioner to possess himself of them, even at the expense of some personal sacrifice.

REFERENCE HAND-BOOK OF THE MEDICAL SCIENCES, etc. Edited by ALBERT H. BUCK, M.D., etc.

The third volume of this great work fully sustains the reputation which the initial volume promised. Everywhere we see good and thorough work exhibited, and the latest theories and practice are treated with the same judicious care as the better substantiated knowledge. This volume begins with Face and ends with Hysterotomy. It therefore includes, alphabetically, many such important subjects as Fever; Field Surgeons, Duties of; Fœtus, Development of; Fractures; Fungi, Edible and Poisonous; Gonorrhœa; Gout; Habitations, General Principles of House Plumbing; Heart; Hernia; Histological Technique; Hospitals, Construction and Management of; Hygiene, etc. These are the captions of a few of the most elaborate sections, for of course the notice of any but such selected heading could not be given in the limits of our space.

Under the head of Fever, contributions are made by different writers on the different species; typhoid fever is specially illustrated by a lithograph of intestinal lesions taken from Cruveilhier. Duties of Field Surgeons, contributed by Dr. Joseph R. Smith, Surgeon U. S. A., is most elaborate, embracing every topic from the organization of a medical corps to the details of the transportation of the sick and wounded by water and land.

The article on Fungi is by the well-known Professor of Materia Medica and Therapeutics in the Charleston College, Dr. F. Peyre Porcher. The subject is an exceedingly difficult one, but the author has succeeded in giving a well digested and well arranged shape to it, so that it can be considered standard text for the general student of mycology for some time to come. The article is well illustrated by wood-cuts, most of them from drawings by the author, and two pages of lithographs. These plates, one of edible and the other of poisonous fungi, are reproduced from the drawings of the Rev. Charles J. Curtis, of North Carolina. These drawings were intended to illustrate a work on "Edible Fungi," prepared, but never published, by the Rev. Dr. Moses A. Curtis, of Hillsborough, and we are pleased to see that so much of the work has been printed in this way, as to give some idea of its scope and conception. Dr. Porcher acknowledges freely his indebtedness to Dr. Curtis' work.

The article on the Radical Cure of Reducible Hernia is from the gilded pen of Prof. Middleton Michel, M.D., of the Charleston Medical College. He thoroughly traverses the whole subject as a practised surgeon, and gives his opinion that the direct method is simplest, most orthodox and rational of all the methods adopted. "To cut down upon the trouble; to meet the difficulty as we would any other deformity resulting from the arrest of development, in the evolution of a natural outlet or opening of the body; to treat the malformation as we would a hare-lip or a cleft-palate; to emarginate the borders of an abnormal cleft in the parts; to co-aretate their edges and restore the integrity of a normal opening, should long ago, it would seem, have suggested itself as the best, as it must prove to be the only veritable, means of finally curing this vice of conformation. It is with something like national pride, therefore, that we announce that to Professors Nott and Gross belongs the credit of this direct method."

We have only desired to show our readers from time to time what treasures are contained in the "Reference Hand-Book," confessing our inability to do justice to the volumes. The work, we believe, is meeting with great success, and surely deserves it.

DRUGS AND MEDICINES OF NORTH AMERICA. By J. U. Lloyd and C. G. Lloyd. Cincinnati, 1886. Vol. II., No. 1.

The first volume completed is a credit to American Medicine,

making a very handsome work typographically, and containing all that can be possibly said about (chiefly) the Ranunculaceæ. Most of the work was original microscopic and chemical research, new to the medical profession. This, the beginning of the new volume, is conducted upon the same plan, giving the geographical distribution of the plants considered. The Magnoliaceæ, beginning with *Liriodendron tulipifera* (Tulip tree, Poplar) is well illustrated and described. After reviewing, all that we know of the therapeutics of this tree is, that during the Confederacy a fluid extract of Liriodendron, Cornus Florida and Salix nigra was used successfully as a substitute for quinine. An alkaloid named *tulipiferine* has been separated by Lloyd, and samples of the hydrochlorate of tulipiferine were placed at the disposal of Prof. Roberts Bartholow, of Jefferson Medical College for experiment. He believes that the empirical employment of tulip-tree (poplar) by Dr. Rush is accounted for by the fact that was discovered by experiments on frogs, that it is a cardiac tonic. Only a small proportion of non-crystalline alkaloid was obtained from quantities of the resin called by Emmett *liriodendrin*, and Lloyd thinks it is possible this alkaloid may prove identical with one already known.

The Magnolias (*M. glauca*, sweet bay; *M. acuminata*, cucumber tree; and *M. grandiflora*) are described, and, although in the present state of our knowledge, little use is made of the magnolias further than in domestic practice to use the root of sweet-bay for poultices, they form an interesting family of trees. The items of history in connection with them (and not about them alone, but all through this work), which are contained in the rich foot-notes, give almost a complete history of American botany and botanists; half a dozen good libraries might be consulted in vain without finding a small fraction of what is given here so appropriately.

One small error in relation to the northern limit of the *Magnolia grandiflora* (although from the high authority of Mr. Mohr, who puts it at 32,30°) we take the privilege to correct, as it was known by William Bartram, and considered of importance enough to be mentioned by him. (Bartram's Travels, 1792, p. 470.) “* * * Crossed Little river at the boundary; which is on the line that separates North and South Carolina: in an old field, on the banks of this river, a little distance from the public house, stands a single tree of the magnolia grandiflora, which is said to be the most

northern settlement of that tree." The verity of Bartram's information is still attested, and this tree stands about 33.50°.

Now is the time to secure this publication, while it is current at \$1.00 a year. The first volume can be obtained from the publishers, bound in green cloth, at \$3.50, or unbound at \$1.00.

THE TIME OF THE GREATEST PREVALENCE OF EACH DISEASE.

* * * A Statistical Report, Based on Weekly Reports of Diseases in Michigan During the Year 1884 and Previous Years.

This pamphlet is a reprint from the Report of 1885 of the Michigan Board of Health. It is a study of statistics collected and arranged by the able secretary of that Board, Dr. Henry B. Baker, whose energies have been turned in this direction for many years. This work is not only an example of the numerical method as applied to the solution of weather and social influences on the cause of disease, but an essay which gives true value to the methods of the collection of statistics. Dr. Baker has put the entire profession and sanitary students in general under obligation to him for his untiring work. Even though the diagrammatic representation of disease may not agree with that of other States—although a casual glance of the diagrams would suggest that there is very little difference between Michigan and North Carolina—the plans and methods of graphic representation ought to be studied by all engaged in the study of the statistics of disease.

If any other State is doing a small fraction of such work as the Michigan Board, we are not aware of it. It need not discourage other States who are doing the merest elementary work, but should stimulate them to strive with earnestness. We recommend the study of this pamphlet to all who ought to be interested.

THE PHYSICIAN'S LEISURE LIBRARY. Published by George S. Davis, Detroit. Whole Series \$2.50. Single Copies 25 cents. Michigan.

This series of valuable dissertations consists of twelve volumes, written by authors of established reputation.

The library will consist of the following numbers: Inhalers, Inhalations and Inhalants, by Beverly Robinson, M.D.; The Use of Electricity in the Removal of Superfluous Hairs and the Treatment of Various Facial Blemishes, by George Henry Fox, M.D.; New

Medications, by Dujardin Beaumetz, M.D., translated by E. P. Hurd, M.D.; The Modern Treatment of Ear Diseases, by Samuel Sexton, M.D.; Spinal Irritation, by William A. Hammond, M.D.; The Modern Treatment of Eczema, by H. G. Piffard, M.D.; Anti-septic Midwifery, by Henry J. Garrigues, M.D.; On the Determination of the Necessity for Wearing Glasses, by D. B. St. John Roosa, M.D.; The Physiological, Pathological and Therapeutic Effects of Compressed Air, by Andrew H. Smith, M.D.; Granular Lids and Contagious Ophthalmia, by W. F. Mittendorf, M.D.; Practical Bacteriology, by Thomas E. Satterthwaite, M.D.; Pregnancy, Parturition and the Puerperal State and their Complications, by P. F. Mundé, M.D.

The subjects to be discussed and the authors who are to handle them, will commend these books to our readers.

THE GENUINE WORKS OF HIPPOCRATES. By FRANCIS ADAMS, LL.D., Surgeon. In Two Volumes. Wm. Wood & Co. Standard Library. New York.

The wise men say it is a good rule to return occasionally to first principles, in order to see the full worth of the work that has been done, or to get down again to the simplicity and purity of the pioneers in the labor. If any of our readers are inclined to turn back and see how their great ancestors in the generations of medicine thought and wrote, we commend these volumes to their careful attention. They are full of much matter that is worth the reading, and justify the veneration with which they remember the great Hippocrates, and they may serve to temper the pride of those who are filled with the excellence of all things medical in this generation, in showing the wisdom and wonderful observation of those dark ages that saw the birth of such collected data as might be called a system of medical practice.

A MANUAL OF DIETETICS. By J. MILNER FOTHERGILL, M.D. Wm. Wood & Co. New York.

There is no more practical writer in our language than Dr. Fothergill, and no department of medicine could receive the master touches from his pen more beneficially than the one devoted to the directions for the proper feeding of the sick. This is done in a purely scientific way, but in the pleasing manner that always characterizes the

writings of our author. Hunger has been set into the round of daily incidents of human life to carry man to his food, and his palate is his guide in selecting food to satisfy these cravings. The carbo-hydrates are the fuel of the body, and make some of the fat as well; the albumenoids repair tissue waste; the salts go into the blood to supply its salts; the fats are, like the albumenoids, tissue-builders, and supply, too, a large proportion of the body fuel. These being the rôles which the different forms of food play, it will interest the reader to see how the authors lead up to his conclusions and deductions. After considering these forms of food and their modes of digestion, the proper manner of cooking or preparing them for use, and the various adjuncts to increase the pleasures of eating, are considered. We are the more inclined to follow the lead of Dr. Fothergill in this matter, because he is a well-kept man, and says in the course of his advice on cooking that he has eaten most of the dishes of which he speaks. This of course includes beverages as well as solid and liquid food. Of stimulants, he makes two divisions: (1) Animal and vegetable substances containing nitrogen, and (2) alcohol.

Taking beef-tea as a type of the first class, he condemns it as a food most emphatically, declaring: "As regards its food-value, it is but a jackass in a lion's skin. But it serves a most excellent purpose as a stimulant;" and to the discussion of this declaration he devotes himself earnestly.

Of alcohol, our author says that after careful study of the question, he is forced to the conclusion that the larger part of the alcohol injected into the body undergoes combustion, and is therefore a fuel-food, but that the question must always remain bipartite, alcohol as a food and alcohol as a stimulant, a force liberator. So clear are his views, and to our mind so practical, that we regret that in the restricted space of a journal review we must leave out his words. He emphatically declares that nothing but dire necessity should lead us to give alcoholic stimulants to children.

Following the chapter on stimulants, are more or less extended ones on fluid foods, canned foods and preserved foods, prepared food for children, and artificial ferments for digestion of foods.

Part II. of this work is devoted to the study of the administration of food in the different stages of life, and in diseases both local and systemic. We hope our readers will find the pleasurable employment in the study of this book which it has brought to us, and we heartily commend it to them to take equal rank with the works of Pavy, King Chambers and Roberts.

CURRENT LITERATURE.

GIVE THE YOUNG DOCTORS A CHANCE.

Within little over a year nine physicians of this city (Indianapolis) have passed to that bourne from whence no traveller returns. Several were men in the fulness of years ; none less than fifty years of age. Seven were members of the Marion County Medical Society ; one was not, nor for ten years, had he been a member. But he was in good standing with the regular profession, and a called meeting of the Society brought out a large attendance of his medical compeers, and the customary resolutions were passed and reported in the local press, and formed the basis of several eulogies. Notably among these tributes was that of his former partner, who stated that he did not doubt but that the deceased had given away at least \$100,000 in charitable practice during his forty continuous years work in Indianapolis. Granting such to be the case, we wish to protest, in the interests of all reputable and hard-working doctors, against such a course.

Medicine is a charitable profession, but it is a charity that should begin at home, and should be directed to one's self, his family and the members of his profession, rather than to be poured out miscellaneously upon humanity at large.

Had the doctor done one-half of this free \$100,000 practice, and spent a larger portion of his time in study, rest and recreation, and in collecting his just bills, it would have been better for himself, his patients, his co-laborers, and notably better for the young physicians growing up around him.

To the latter he was of no aid in any scientific or professional way, except as a model of a hard-working doctor, taking everything that fell in his way, and collecting what he could.

The young men growing up around him, in his earlier days, could have done the poor practice, and had time to collect some portion of the bills. People call the old doctor who always goes on call, time and time again, and reason about as follows : " Well, the old family doctor is pretty well fixed ; he is a slow collector, and I

know a score of people who have been owing him bills for years." They know they can get the services of such men for the old fifty cent and seventy-five cent rate with the medicines thrown in, just as their fathers and mothers did, and "pay after harvest." This course will not do now. One month is as good for pay as another, and the first is always the best.

If the remaining wheel-horses in the profession will make fewer bills, charge full rates, collect them promptly, sleep more at night, attend medical societies, avoid routine, and keep up with the rapidly moving procession of the present, they may expect to live to a green old age, have a fair consultation practice, a few score of old families whose children will rise up and call them blessed, and will have no other doctor before them. Nor will the societies have to report, as has been done four times the past year in the Marion County Society, that the deceased had literally worked himself to death to make bills that were never paid, and that his family is left without a competence.

By such a course the community will be educated to the belief that medical bills are to be paid. Young men will have a chance to do the shaky practice in their own neighborhood, and will collect a much larger portion of it than is now done. The patrons will receive better care. And the barriers between the young and the old practitioners will melt away, and they will recognize the common interests of humanity and of the profession itself.—*Indiana Medical Journal*.

THE CAUSATION OF PNEUMONIA.

In *Science* for August 27th, 1886, Dr. Henry B. Baker, commenting on Dr. Seibert's deductions from his observations of seven hundred and sixty-eight cases of pneumonia, that "whenever there exists a low or falling temperature, with excessive and increasing humidity and high winds," the disease prevails to its greatest extent, says: "This reminds me that readers of *Science* may be interested to know that facts respecting a very much larger number of cases, and respecting pneumonia in different parts of the United States, in England and in India—that is to say, in several climates

and under different conditions—confirm, to some extent, the conclusions reached by Dr. Seibert, as mentioned by *Science*. Such statistics, presented by abstract at the last meeting of the American climatological association, demonstrate, I think, that the sickness from pneumonia is absolutely controlled by the temperature of the atmosphere. The higher the temperature, the less the sickness from pneumonia; and the lower the temperature, the more the sickness from pneumonia. This is equivalent to saying that that part of the conclusion of Dr. Seibert which relates to humidity is an error; because the absolute humidity of the atmosphere is, speaking roughly, directly as its temperature, and there is most sickness from pneumonia when, or soon after, the air is driest absolutely; and there is least sickness from pneumonia when, or soon after, the air contains the most vapor of water, that is, when the temperature is highest. Relative humidity seems to have an opposite relation in the warm months to what it has in the cold months. The fact, which I think I have completely demonstrated, is that, in any given place wherever studied pneumonia is quantitatively proportional to the coldness and dryness of the atmosphere; and, as this is true for every month of the year, it follows that, if there is any pneumonia which is infectious, it is absolutely dependent upon those meteorological conditions for its action upon the human organism.

In the paper to which I have referred, I have advanced a theory of the causation of pneumonia consistent with the facts demonstrated; and, briefly outlined, it is as follows: Air expired from the human lungs is nearly saturated with vapor of water at a temperature of about 98° F., and this contains about 18.69 grains of vapor in each cubic foot. The quantity of vapor exhaled is at all times greater than the quantity inhaled; but when the air is very cold and dry, the quantity exhaled is excessive, as may be seen when we reflect that air at 32° F. can contain in each cubic foot only about two grains of vapor. The fluid which passes out from the blood into the air-cells of the lungs, and which normally keeps them moist, contains some of the salts of the blood; and the chloride of sodium, not being volatile, is mostly left in the air-cells when the vapor passes out with the expired air. When the air inhaled is excessively dry (as it always is when excessively cold), this salt collects in the air-cells of the lungs in considerable proportion. This is proved by my statistics, which show the increase of

pneumonia at such times, taken in connection with the fact that chloride of sodium in the lungs is in excess in pneumonia, which was proved in 1851 by Lionel S. Beale, M.D., of London, England. Dr. Beale also verified the observations by Redtenbacher, made in 1850, that during the onward progress of pneumonia the chlorides disappear from the urine, and reappear when convalescence has been established. In the air-cells, the chlorides are irritating when they become concentrated; but the exudation of fibrine, which is the most prominent condition in pneumonia, is probably favored by a fact in osmosis which is not generally well understood, namely, that albumen, which it is usually considered will not pass by osmosis, will pass through an animal membrane to a solution of chloride of sodium.

Thus the causation of pneumonia by the inhalation of cold dry air seems to be completely worked out. As a cause of deaths, pneumonia is one of the most important diseases. It is hoped that its prevention may now begin.—*Science*.

RUBELLA, OR RÖTHELN.

The paper was based upon a review of the literature of the subject and a study of the reported cases. The disease was regarded as distinct from measles and scarlet fever. The period of incubation varies between two and three weeks. In many cases there is no prodromal stage; there may, however, be prodromata for twelve or twenty-four hours; catarrhal symptoms are generally absent, but they may be present; sometimes there is congestion of the throat; swelling of the lymphatic glands is a peculiar and marked symptom; this swelling is painful, but does not pass on to suppuration. In many cases fever is absent; the eruption first appears on the forehead and face, and in the course of a few hours spreads to other parts of the body; the eruption is more or less irregular, being more intense in some situations than in others; from the beginning to the disappearance of the eruption is usually three or four days. In the greater number of cases desquamation fails to occur; complications and sequelæ are not unknown, the most common being bronchitis, pneumonia and gastro-intestinal disorders; renal affections may follow this disease; relapses occasionally occur, but not later than the end of the second week. The prognosis is almost always favorable.

The only difficulty in diagnosis is in connection with measles, and in isolated cases a thorough consideration of all the points is essential to a correct conclusion. Very little treatment is required, except in the presence of complications.

On account of the confusion existing as to the nomenclature of the disease, the speaker suggested that rubella be accepted as its proper title, and that it might be known in popular language as epidemic roseola.—*From a paper read before the American Dermatological Association, by Dr. I. E. Atkinson—Medical Times.*

CORRESPONDENCE.

SUICIDE BY CHLORAL HYDRATE.

RALEIGH, N. C., September 8, 1886.

Messrs. Editors North Carolina Medical Journal:

I trust you will allow me space in your valuable journal to relate a case of suicide which recently came under my observation, and which should be of interest to the profession from the fact that the agent used is one of our most potent, and, I might say, our salient remedies, in the treatment of insomnia generally, and particularly the sleeplessness incident to delirium tremens.

On the morning of July 18th, I was called to see Mr. ———, a man apparently about 35 years of age, who had just arrived in our city and registered at the hotel. I found him suffering from alcoholism, and his general appearance was indicative of a long debauch—was extremely nervous, and talked incoherently. After satisfying myself that he was fast bordering upon that condition known to drinkers as "*the horrors*," I wrote for him two prescriptions, one for eight ounces of spirits frumenti, and the other for a two-ounce solution of chloral hydrate (20 grains to each f 3 i), containing, in all, 320 grains of chloral. I directed one table-spoonful of whiskey to be given in milk every three or four hours, and one tea-spoonful of the chloral mixture to be administered at intervals of two or three hours, till sleep was induced. I also ordered a cantharidal plaster, 4+6 inches, to be applied to his spine over the cervical region. With full instructions as to the management of the case, and advising that a competent nurse be procured at once, I left, promising to return in the afternoon.

At my next visit (seven hours later) I found my patient sleeping quietly from the effects of two doses of the chloral. The fly-plaster had been removed, and upon examination I found it had bistered admirably. His pulse was good, and his general condition was so much improved that I assured the proprietor of the house that he would be able to get out the next day.

During the early part of the night Mr. ——— persuaded his nurse to allow him to take a walk, and while out he went to a drug

store, where he found a physician and procured a prescription for a pint of whiskey, all of which he drank during the night.

At my morning visit I found patient suffering from the effects of the spirits, and at once decided to quit the case, but after a moment's reflection, feeling that I could yet relieve him, I reconsidered my hasty decision, and ordered half a teaspoonful of the chloral mixture and two tablespoonfuls of whiskey to be given him within two hours.

After leaving the room, I learned that early in the morning the patient had attempted to take his life with a revolver, but was prevented from doing so by his attendant. Seeing that his intentions were suicidal, every precaution was taken to prevent him from doing violence to himself. The whiskey remaining from the original 8-oz. prescription and the bottle containing the chloral were left with the proprietor, who had all the while kept them out of reach of our patient, but who, on being hurriedly called away, left both bottles in the room. During the absence of the proprietor he sent his nurse out to make a purchase for him, and while there alone, drank the remaining chloral, which was about 160 grains. Returning with the purchase, the boy discovered Mr. ——— lying across the bed breathing stertorously. He at once notified the proprietor, who, upon seeing the man's condition, dispatched several messengers for me, but being absent from my office, on my morning rounds, I did not get the message in time to reach his bedside before this remedy, which is so potential for good when used in medicinal doses, had done its work, and the patient, whom I had left only three-quarters of an hour before with every indication of a speedy recovery, was before me a corpse.

An examination of the body revealed that discoloration of the surface, so characteristic of chloral poisoning, that there was no mistaking the cause of death.

I have related this case not so much for the interest which it, *per se*, presents, but to point out the necessity of handling chloral hydrate with as much care as we do strychnine and other active poisons.

The smallest authenticated fatal dose is 20 grains, and the fact that a dose less than the usual medicinal dose has been known to prove fatal, points out very clearly to my mind that we should be exceedingly careful in its administration. Individuals show very

different degrees of susceptibility to this drug, and while many cases are recorded of persons recovering after taking as much as 160 grains, I have never known of recovery following such a dose as that reported by Dr. Hornaday in the last number of your JOURNAL—420 grains. Dr. H. attributes recovery in his case to the fact that his patient had saturated his system with whiskey prior to taking the chloral. It would seem to me that in this opinion the doctor is in error. The fact that his patient was an habitual drinker, and had several times suffered from *mania a potu*, would lead us to think his heart was greatly enfeebled as a result of his long intemperance; and it is a well established fact that chloral is not well borne by those patients who suffer from feeble circulation. Dr. Hornaday's patient took 420 grains of chloral and made a good recovery after nineteen hours. My patient took 160 grains and died within 30 minutes. The only way I can account for the difference in the results of the two cases is in the fact that individuals show very different degrees of susceptibility to this drug, for neither case, so to speak, received treatment—my patient dying before I could reach him, and treatment being delayed seven hours in Dr. H's case.

Respectfully,

W. H. BOBBITT, M.D.

PARIS LETTER.

PARIS, August, 1886.

Messrs. Editors North Carolina Medical Journal:

I had the good fortune to be present during a portion of the late session of the British Medical Association at Brighton. It is even more national in character, if possible, than the corresponding body in the United States, and there were very few eminent men in the kingdom who were absent. There could not possibly be a place more suitable for such a meeting than Brighton. In the first place, it is easily accessible, although that might be said in regard to almost any town in the country from our American idea of distances in travelling. The beauty of the city, and its fine situation on the sea, are much in its favor, while its numerous hotels and 120,000 inhabitants are fully equal to the task of providing for a large number of visitors. But

perhaps the most unusual advantage that the meeting this year has enjoyed is the building which had been given up for its use. Although built by George IV., when Prince Regent, and called the Royal Pavilion, it long ago passed into the hands of the corporation of the city, and is now used for public purposes. It was erected at enormous cost, and is elaborately decorated. The style of architecture is oriental, the roof abounding in minarets, domes and domelets. It does not accord with English taste, and has been much ridiculed. Sydney Smith said that it looked as if the dome of St. Paul's had come to Brighton and pupped. Nevertheless, it served an admirable purpose when a large association met under its roof. Each section had a large, beautiful and well-lighted room for its own use, and members could go from one to the other without going out of doors. It was not necessary to go from one part of town to another in looking for a certain section, as is frequently the case. The advantage of this arrangement to a stranger desirous of seeing and hearing as many distinguished men as possible was particularly great. Thus in one afternoon I was able to hear papers and discussions by such men as Lawson Tait, Edis, Ericsen, Barnes, Playfair and Thompson. Mr. Lawson Tait has a physique which for some reason, perhaps the hard work which most of them undergo, is extremely rare among doctors. Of about the medium height, he is not only portly, but distinctly fat, and has somewhat of the appearance of the traditional representation of John Bull. His style of speaking is quiet, but vigorous, while independence and self-reliance are as much a part of his nature as his flesh and blood. After seeing and hearing him one does not wonder at the bitterness of the controversy which has now for several years been kept up between him and his great rival, Sir Spencer Welles. But among his friends he is genial enough. His boldness and self-reliance were strikingly illustrated in a late article reporting about 130 successful recoveries after ovariectomy, which may have since been reproduced in American journals. He stated that his method of cleansing the abdominal cavity was by washing it out with unboiled water direct from the ordinary supply of the city of Birmingham, without any attempt at asepticism, and that he would have no objection to using as a dressing a pad of germs, if he could get enough of them in a dry state. He also said that it had been his custom for several years to treat peritonitis, not with opium or morphine, which he considered a poison in such cases, but with a purge. He spoke of this, indeed, as if it had

become a common practice with others. Shall we have to wait for the millennium for the arrival of the truth in medicine!

In appearance Sir Henry Thompson is just the reverse of Mr. Tait, being sparsely built and not tall. In speaking, as in his writings, he is singularly clear and forcible. He was listened to with marked attention.

Mr. Eriksen is much older than either of these, though apparently not more than sixty-five. He is above the average in height, is well proportioned, and, with a fine face and head, has altogether a remarkable presence. His address as president of the surgical section, which was evidently committed to memory, was a particularly graceful and scholarly review of the present position of surgery.

The reception accorded to the prominent members of the profession from America, an unusual number of whom were present, was extremely cordial, both by the Association, as a body, and by its members individually. The Address in Medicine, by Dr. Billings, and a paper read by Dr. Lusk, were praised publicly and privately in the very highest terms.

The honor paid to the representatives of the International Medical Congress, who were present to urge the acceptance of the invitation to come to Washington, was particularly marked. Chief among these, of course, was the president elect. Dr. Davis was introduced to the Association at the first meeting, was asked to move an important motion, and at a general meeting he and his colleagues were invited to the rostrum to make addresses on the subject of the Congress. Dr. Davis made an admirable speech, and was followed by Dr. Brodie and Dr. Pancoast, who spoke briefly. If the reception of their remarks is any indication of the real feeling of the profession in England towards the Congress, there need be no doubt of its being well represented at Washington.

I make no attempt at dealing with the scientific work of the meeting, since this will be duly published, and that which is of value will no doubt reappear in our own journals.

I have visited M. Pasteur's laboratory in the Rue d'Ulm, in which the preparation of the virus for the treatment of hydrophobia is carried on, and also the dispensary in which the inoculations are made, and have witnessed the entire process. The original virus was obtained from a dog who died of rabies four years ago. It has been propagated by successive inoculations in rabbits, and there is

no appreciable difference in its virulence. These animals are chosen because they are very susceptible to the disease and are easily obtained, although the fact that they never show any disposition to bite is an additional advantage. A rabbit is tied securely to a board, chloroformed, and a button of bone taken from the cranium with a trephine. About one minim of a fresh solution of virus is then injected into the brain, and the wound is sewed up. Two rabbits are used in order to provide against possible accidents, one of which is death from diarrhœa, although this is rare. They commonly eat as usual as soon as they recover from the effects of the anæsthetic. The wound heals on the third or fourth day. About the seventh day the disease shows itself by a paralysis beginning in the lower extremities and gradually extending afterwards until death results on the twelfth day. These injections are made daily in order to have a daily death with a consequent fresh supply of virus, so that in the laboratory there are always rabbits in every stage of the disease. To the natural question, Why are the injections made in the brain instead of under the skin? the reply is that it has been found by experiment that when made in the brain, death takes place with uniform regularity on the twelfth day, whereas if made under the skin, it may be delayed until the twentieth. It is of the greatest advantage in managing the treatment to be able to depend on having a regular supply of virus.

On the death of the rabbit the spinal cord is removed and suspended by a thread in a bottle sealed with cotton and supplied with a layer of caustic potash for the purpose of drying, which is further aided by raising the temperature to 25° C. This drying is an essential part of the process, the number of days of remaining in the potash bottle regulating in an inverse ratio the virulence of the poison. A preparation of the *moist* cord, fresh or not, injected into a rabbit or dog, causes rabies and death, and it is this which is used in the inoculation described above. A preparation made when the cord has become partly dried will not cause death, but if repeated in the proper manner will not only protect the animal from rabies, but will prevent death if the animal has already received the poison into his system, provided the treatment be not applied too late. This, as is well-known, is the claim which is made by Pasteur and which is still on its trial before the scientific world. For the treatment of human patients as carried on daily in scores

of cases a solution is made by rubbing up one cubic millimetre of the spinal cord in one cubic centimetre of veal broth. The injections are made over the abdomen, several minims being used. In ordinary cases the treatment is begun with the injection of a preparation made from a cord that has been drying for fourteen days, the virus being then very weak. It is repeated daily with virus of increasing strength until a solution of a cord that has been drying for three days is used, and this last is continued for three weeks. The strength has been increased up to a one-day solution, but this is not now considered safe, and it is no longer carried in any case beyond the three days solution. In patients who have been bitten on parts not protected by clothing, the injections are made three times a day, and the increase in strength becomes much more rapid, so as to gain the full effect as quickly as possible.

The crowning experiment would seem to be to inject two men with virus from a fresh specimen of spinal cord, one of whom had been through a course of protective treatment, and note the result. This being impossible with men, it has been tried on dogs, with the result that the dogs which had been under treatment either did not take the disease or recovered after a mild attack, while the others died with the ordinary symptoms of hydrophobia. The result of experiments upon the lower animals and the generally successful treatment of persons who have been bitten by dogs thought or known to be mad, would seem to make the proof complete. To require that the treatment should never fail would be more than is demanded in the case of any other disease. Nearly all the failures are in those cases bitten by mad wolves, and it is thought that there must be some peculiarity in the virus from wolves which accounts for it.

The number of cases treated now amounts to about 1,900, but a large proportion of these have been persons who have come after an ordinary dog-bite simply as a matter of precaution, while a large number of others were bitten by dogs only suspected of being mad. There has been no recent statement of the exact results of treatment in persons bitten by dogs known to be mad, but this will no doubt be given in due time.

It is well-known that rabies is not confined to the canine tribe, but it is a curious fact that Guinea pigs are not susceptible to it. There are Guinea pigs in the laboratory that have been inoculated frequently with the strongest virus, and they are in perfect health. No microbe of rabies has yet been discovered.

K. P. B., Jr.

TERRIBLE AFFLICTION TO THE MEDICAL PROFESSION OF CHARLESTON—DESTRUCTION OF THE VENERABLE MEDICAL COLLEGE BUILDING AND ROPER HOSPITAL BY EARTHQUAKE.

There is universal mourning for dear old Charleston in this, her greatest affliction. Especially from every part of the land where the fearful convulsions of the earth were felt, hearts will beat in sympathy with those stricken ones who suffered in the intense throes of the unmitigated shock of the earthquake. The peril of these awful seconds is inconceivable to non-participants, and can never be described. A whole city full rendered homeless in a few moments, driven pell-mell into the streets and open spaces to escape death, and in their new places of refuge dreading worse miseries to come. Naked, appalled, they fled—delicate women, with their infants, feeble men and invalids, people of all classes, of all colors, helpless and hopeless, except in the sure mercies of God. Women were seized with the throes of labor and gave birth to infants under their temporary shelter in the streets and squares, and others had the slender thread of life broken, and surrendered their spirits with no other covering than the blue canopy of heaven. In a moment of time a great population was levelled by the visitation as of an angry God. Servant and master, the proud and lowly were brethren in this dire affliction, none having any recourse but in prayer to God. It is useless to attempt to pencil their woes and distresses in the feeblest manner, we can only pour out our hearts in sympathy to them, and give our substance to their relief as we have been prospered.

The Medical College was seriously damaged, but will be repaired so that lectures will begin, as announced, on the 15th of October, and the Alumni of the time-honored institution can now do it a service to see that it is not damaged further by any reports of its discontinuance, and that the energy of its faculty is properly presented to the public, and to young men particularly, seeking a medical education. We feel justified, from our knowledge of the men who are in charge of the College, in promising that it will be carried on with the same zeal and industry as before.

If any of our readers should desire to direct their donations to

Charleston so that they may be applied to wants of the profession there, they can accomplish it by sending them to Dr. Middleton Michel, and he will distribute them according to the wishes of the donors for the benefit of medical men and their families. In a letter to us Dr. Michel says :

" * * * Our urgent need at present is the repairing of the Old Medical College of the State of South Carolina. It will take \$6,000 to do this.

"The College is an individual organization, it is not a city or State organization, and it has no endowment. The faculty has always supported it through all its trials, and we have never before asked for aid. We want this aid now, and I, for one, am not ashamed to beg.

"This revered Institution was established in 1826 or 1823, I do not remember exactly.

"As to the Roper Hospital, this is a bequest of Mr. Thos. Roper. The trustees of this fund is the Medical Society. They have money and can rebuild the Hospital. After the war the city hired the building, as we could not then run the Hospital. But now Mayor Courtenay contemplates building a City Hospital on the most approved plan, which I have no doubt will be a model of a building, etc.

"What we now must urgently require is the means to rebuild our poor Old Medical College, and in this direction you must move, with others, to help us.

"The Medical College, as I find, was established in 1824, graduating its first class in 1825.

"The Faculty of 1824 consisted of J. E. Holbrook, Samuel Henry Dickson, James Ramsay, T. G. Prioleau, H. R. Frost, Stephen Elliott, with Eli Geddings as Demonstrator, Thomas G. Prioleau 1st Dean.

"Added to this above Faculty in after years were James Moultrie, John Wagner, John Bellinger, C. U. Shepard, Eli Geddings, *Louis R. Agassiz*.

"Present Faculty, R. A. Kinloch, Middleton Michel, F. L. Parker, F. P. Porcher, J. F. Prioleau, Allard Memminger, John Guiteras, etc. ; R. B. Rhett Demonstrator, M. Ravenel Assistant Demonstrator, and F. Herbert Hacker Microscopist," etc.

The faculty have issued the following address to the profession in South Carolina, to the Alumni of the Medical College and its friends at large :

"The faculty of the Medical College of the State of South Carolina desire to announce to the profession in the State that the exercises of the College will commence, as usual, on October 15th next.

"In the great calamity which has befallen the entire city the Medical College has been very seriously damaged—the roof being injured and the walls partially destroyed. The pediment and portico are entirely demolished. A new building will be immediately constructed and every accommodation afforded to the students of medicine who may favor us by their presence.

"The faculty in this emergency trusts with confidence to the patriotism of their brethren of the profession and to the whole people of the State to aid them in their efforts to preserve and perpetuate a time-honored institution which has survived the shock of war, and which is dear to the hearts of its Alumni in every State North and South. This faculty, amidst the general ruin which surrounds them, with the assurance of the aid and support of the medical profession, are firm and confident in their ability to vanquish difficulties which would otherwise seem insurmountable."

Apropos to the duty of the profession in the great distress of our brethren in Charleston, we append two clippings from the *News and Courier* of the 17th instant, which will suggest to our readers an idea of how they can promptly send in their contributions to our friends :

"Those interested in medical education and progress throughout the South have been deeply concerned at the destruction of our Medical College building. No more cheering indication can be given for the animation of the faculty in the hope of a yet brighter day in store for our good old city than is furnished in the daily receipt of letters from the most prominent medical men of our country, promising aid through special contributions for the prompt rebuilding of this revered and venerable institution.

"We are in receipt of letters from Drs. Thomas F. Wood and George Gillett Thomas, editors of the NORTH CAROLINA MEDICAL JOURNAL, and Dr. George F. Shrady, editor of the *Medical Record* of New York, stating that a call has been made upon the profes-

sion to aid their medical colleagues who have met with so great a calamity.

"Contributions have already reached here from Profs. L. A. Sayre and Albert H. Buck, of New York, for the above purpose.

"MIDDLETON MICHEL, M.D."

"Dr. F. Peyre Porcher has received the following letter from Dr. Louis A. Sayre, of New York, an ex-president of the American Medical Association, and one of the first physicians of the age. The letter speaks for itself, and will doubtless draw the attention of the profession throughout the country to the needs of the ruined College. Dr. Sayre says :

"I have read your letter with deep sympathy, and sent copies of it to be published in the *Record* and *New York Medical Journal*, with an appeal to the profession for immediate aid. I have advised every doctor to send you immediately the first fee he receives after reading your letter, and, if they do so, the aggregate amount will be of great help to you. And, to prove the value of my advice, with a desire to put it in practice, I enclose my check for \$50, and sincerely wish it was \$500."

The NORTH CAROLINA MEDICAL JOURNAL holds itself ready to aid the physicians of Charleston in any way they may see that its columns can serve them.

SUINT AND LANOLINE.—While the medical profession is busy in making available the natural grease found in sheep's wool, and, coining a new word—*lanoline*—for it, manufacturers have taken up the subject in another way. In the *Scientific American* (August 28th) we find an account of a new process to make this fat available in the manufacture of soap. Heretofore immense quantities of *suint* (the old and well-known name in the trade) have been wasted, and very noisome to the neighborhood where it is discharged. A new French process utilizes *suint*. It is raised to the melting point, and mixed with sulphuretted hydrogen, which it absorbs readily. The nature of the fat is so altered that it saponifies like any soap-fat. The sulphuretted hydrogen is not at all perceptible in the new product.

DEATH OF C. W. EAGLES, M.D.

At the regular evening meeting of the Edgecombe County Medical Society, held at the residence of Dr. N. J. Pittman, on August 2, 1886, the following resolutions were submitted by the committee :

WHEREAS, Since our last meeting (July 5th) it has pleased our Heavenly Father, in His providence, to remove from earth our worthy and esteemed fellow and co-laborer, Dr. C. W. Eagles, aged 34 years ; while we bow in humble submission to this dispensation of Almighty God, we cannot but bemoan the loss to science and to this Society of one promising so well. Therefore, be it

Resolved, That we tender to the bereaved and afflicted family our heartfelt sympathy in this, the hour of their trouble and distress.

Resolved, That we wear the usual badge of mourning for thirty days, and that a copy of these proceedings be forwarded to the family of the deceased, and be spread upon the minutes of this Society.

(Signed)	J. W. JONES, M.D., J. M. BAKER, M.D., G. S. LLOYD, M.D.,	}	Committee.
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By request of the Society these resolutions are sent to the NORTH CAROLINA MEDICAL JOURNAL for publication.

N. J. PITTMAN, M.D., President.

G. S. LLOYD, M.D., Secretary.

A DRACHM of saturated solution of common salt in cider vinegar three times a day, is recommended by Dr. Smith in the *Therapeutic Gazette* for chronic diarrhœa.

SACCHARIN, the new intensely sweet derivative from coal-tar, can be used by diabetics for sweetening dishes, and being acid, combines with quinine, almost completely masking its taste.

DR. MUSSER, of Philadelphia (*Therapeutic Gazette*), has revived (?) the old treatment of summer diarrhœa of infants by $\frac{1}{8}$ gr. doses of calomel, and in cases when it is needed $\frac{1}{4}$ gr. doses of Dover's powder combined, mixed with a little sugar, and given at short intervals.

NOTES.

PODOPHYLLIN resin from leaves of podophyllum has a much milder action than from the rhizome.—*Am. Jour. Pharmacy.*

COMMON SHEEP-SORREL poisoned a lad in Birmingham, England. He ate a large quantity of the plant. It contains, according to Mitscherlich, the proportion of 75 per cent. of binoxalate of potassium in the fresh plant.—*Brit. Med. Jour.*

TEST FOR BILE IN URINE.—Agitate a few drops of chloroform in a test-tube with suspected urine. If bile be present the chloroform becomes turbid, and acquires a yellowish hue, the depth of which is in proportion to the amount of bile present.—*Natl. Drug., Am. Drug., Buffalo Med. Jour.*

THE BELLADONNA SPECIFIC AGAIN.—One of the first sensations of the Hahnemannian system was that belladonna was a specific for scarlet fever. The beauty of the theory was this: belladonna produces a scarlet rash, dry throat, etc., the irresistible deduction was that the effect of belladonna simulated the prominent symptoms of scarlet fever; therefore belladonna given during the presence of an epidemic, prevents scarlet fever. The newspaper in which we saw this restated error speaks of it as a discovery of Dr. Holcomb, of New Orleans, and rests in its virtues with the same certainty that one feels for vaccination. Unfortunately, a very large experience for at least twenty-five years proves that belladonna is not a prophylactic of scarlet fever, and does not modify it in any sense of the word. It is a very gross error to give publication to the virtues of belladonna as a preventive, and will certainly delude many persons who will read and believe in their newspaper, but who never see a medical journal.


ANTIFEBRIN—A NEW ANTIPYRETIC.—The *New York Medical Journal* (September 4th) gives a description taken from the *Centralblatt für Klinische Medizin* (August 14th) of a new antipyretic. It is not a new substance, being the neutral principle known as acetanilide or phenylacetamide, the formula for which is $C_6H_5NHC_2H_3O$. It is a white, crystalline, odorless powder, producing a slight burning sensation when applied to the tongue. It is almost insoluble in cold, but soluble in hot water, and freely

soluble in alcohol. It is closely related to aniline chemically, but was not poisonous to dogs and rabbits in comparatively large quantities, nor did it reduce their temperature. It has been tried in a limited number of cases in the human subject in phthisis, typhoid fever and articular rheumatism. The doses varied from 4 to 5 grains, and thus far not more than 30 grains have been given in a day. Ordinarily its effect is shown within one hour, reaches its maximum in four hours, and lasts from three to ten hours, according to the dose. No unpleasant effects in digestion have been observed. At first the experimenters felt some alarm at the cyanotic condition produced, but this gradually disappeared.

HAVING made arrangements with the *Therapeutic Gazette* and *American Medical Digest* by which we can offer those valuable journals in combination with the NORTH CAROLINA MEDICAL JOURNAL at reduced rates, we make the following offer to new subscribers and to those who wish to renew their subscriptions :

THE NORTH CAROLINA MEDICAL JOURNAL and

	<i>American Medical Digest.</i>	<i>Therapeutic Gazette.</i>
Single copies (one year) at....	\$4 50	\$4 75
In clubs of 3 " at....	4 25	4 50
" " 6 " at....	4 00	4 25
" " 9 " at....	3 75	4 00
" " 12 " at....	3 50	3 75

 These prices are strictly in advance.

DRS. ROBE & HALL, WOODBURN, KY.—We find Peacock's Bromides to be one of the best remedies we have ever used in nervous headaches, and in cases where a nerve sedative is indicated, it acts admirably.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLETT THOMAS, M. D., } Editors.

Number 4. Wilmington, October, 1886. Vol. 18.

ORIGINAL COMMUNICATIONS.

TRUE AIM AND SCOPE OF THE MEDICAL PROFESSION.

By GEO. W. LONG, M.D., of Graham, N. C.

(Annual Oration, read before the North Carolina Medical Society, at
New Bern, May 21, 1886.)

Mr. President, Fellows and Friends:

It is by the appointment of our Society that I now have the honor of addressing you. I should be proud on any occasion of acting as its representative. In casting about for a subject, I find the field very much narrowed down by addresses on previous occasions, and am almost at a loss to know what to talk to you about. I believe it was Talleyrand, or some other philosopher, who said that "the world did not need so much informing as it did reminding." Taking this proposition as correct, and considering the large number of young men who have recently joined our Society, I have concluded to address my remarks, for a few moments, more especially to them by way of reminding them of the

TRUE AIM AND SCOPE OF THE MEDICAL PROFESSION.

One of the most prominent points in our consideration of the character of the medical profession is that it is not a business for making

a fortune, or an instrument for the attainment of anything of a purely selfish character. Think for a moment on the great ends which it proposes—the alleviation of suffering man and the preservation of his life. To exist and to be free from physical pain are, doubtless, the two greatest earthly blessings of man. In the pursuit of other objects they are often exposed to great risk. Like the gambler, we heedlessly stake them in the great games of the passions; like him who suffers death for the truth, we sometimes offer them up at the shrine of duty; but in the first case the loss of the game brings despondency; in the other there is an exchange of temporary blessings and comforts here, for eternal happiness hereafter. What are all the good things of this world without health to enjoy them? And what boots it if we gain wealth and power, and at the same time lose our own lives, upon the continuance of which hangs all the pleasures of success? If, then, physical indisposition and death are the greatest of worldly evils, how grand must be the profession whose purpose is to obviate them! Those who undertake its duties assume a great responsibility to devote themselves to its high functions. It would be well were this the prominent feeling of all our doctors. It is not a question with the student of medicine, as with the worldly neophyte, whether he shall gain or lose in proportion to his industry or negligence. If this were the only consideration, he most probably would, under strong temptation, become reconciled to inattention and idleness, on the score that his conduct is purely a matter of expediency; that, if he saw proper, for present gratification, to sacrifice a portion of future good, nobody has a right to complain, as no one but himself can be affected. In reference to sordid interests alone, it is true, this reasoning would be unsound. In the higher view of the scope of the profession, which, without doubt, is the just one, such an excuse could not be offered to the most obtuse conscience. The medical practitioner, constantly keeping it before his eyes, could never give way to the temptation of idleness without a consciousness of duty neglected. This high conception of our office should not only be indelibly fixed in our minds, but should pervade all our professional thoughts. Habitually cherishing such sentiments not only encourages diligence in the pursuit of professional knowledge, but ennobles and elevates our characters. One lofty sentiment, carefully entertained, acts like a ferment, leavening, in a greater or less degree, the whole soul into its own nature. There is a contagion of good as well as of evil. Those who have

entered the profession should realize the fact that they have bound themselves to devote their best energies to the good of their fellow-man, so far as life and health are concerned ; and this consciousness will raise them above all that is selfish. Think for a moment of a man who becomes a physician from a purely selfish motive. In the first place, he probably starts without sufficient preparation, because he has been without sufficient inducement to the requisite exertion. In the second place, as he is not so desirous to cure disease as to make money, the former will yield to the latter, when the two are incompatible. He will most likely be an unskilful practitioner, and not employ to the best advantage the knowledge he may possess. His unfortunate patient is looked upon simply as a customer. Allow him to be so far honest as to sell the best he may have at a fair price. This disposition cannot long continue. The tendencies of his mercantile position will always be to make as much money with as little expenditure of time and trouble as possible. To successfully resist evil one must have the strong support of principle, with the most careful avoidance of all seductive influences. Among the petitions that we are directed to offer to our Father who is in Heaven is that we may not be led into temptation. A doctor with no other than selfish motives is voluntarily and unceasingly exposing himself to influences which he is thus taught to shun. His prayer against temptation can be of no possible avail. Let us examine the probable course of the trafficking doctor. Of course it differs somewhat under different circumstances ; but on the whole is inevitably downward. Suppose he has a good start in an unoccupied field, and without competition. If he is not already corrupt, he may aim to practice fairly, giving to each case its due amount of attention, and demanding a just remuneration. But he soon begins to imagine that he is not making the most of his opportunities. He finds out that he can make more with less cost of time and labor. His visits to those patients who can pay but little gradually become fewer ; to those who can pay well gradually more frequent ; for he is paid by the visit ; and he now thinks that no one is entitled to attention he cannot pay for, a wait better than to a pair of shoes below cost. This is lucky for a poor man afflicted with a spontaneously curable or easily treated disease, for he gets well with very little medicine and at small expense. But woe to the man that is seriously ill and in need of regular and careful attention. Woe,

too, to the rich man in pocket and in health. His case is to be cherished. He receives visits in abundance and doses without number; but there is no corresponding amendment. He may finally get well, for nature will sometimes cure in spite of the doctor; and besides, the conscience is not yet hardened to murder; and interest, even, requires that the sheep already fleeced should be kept for another shearing. Some attention must be paid to reputation; and the patient and his friends must not be scared off by suspicions, either of deficient skill or foul play. So far as the doctor is concerned, the duration of the case is a matter of complex calculation. On one side are the dollars, on the other some remains of conscience, a little regard for future opportunities, and, perhaps, a sickly season. The welfare of the patient and professional duty are not taken into account. Suppose that competition has now sprung up, or has existed from the first. A double game must be played. The rival must be undermined and gold must be won at the same time. Under these circumstances there may be more caution in practising tricks of trade, for a knowing and watchful eye is upon his movements, and a fair seeming is essential to success. Here the selfish spirit shows itself in endeavors to try to depreciate the rival by disadvantageous comparisons, false insinuations, or even direct falsehood. The medical brother is offended, however correct and high-minded he may be, and unseemly disputes, which disgrace the individuals concerned, one or both, and injure generally the profession in public esteem. It may be that, instead of regular competition, some variety of quackery comes upon the stage, and the public mind is thrown into excitement by the novelty or the flaring pretensions of the new practice or doctrine. Our doctor, if quite lost to all principle and self-respect, and surrendered, body and soul, to mammon, is now apt to set his sail to the popular breeze, and to meet the new rival with his own weapons. Perhaps he proclaims himself a convert, and professes to practice on the novel plan. Perhaps he goes only half way, and, medical demagogue as he is, declares his submission to the will of the people, and agrees to cure them in whatever way they may deem best, whether by homeopathic globules, by sweating and red pepper, by cold water, or in the old way. There is but one more step in this ignoble descent. His cupidity is excited by the reported success of some renowned advertising doctor. He hears of this or that pill-

vender or nostrum-monger, as having accumulated great wealth, and living in corresponding magnificence. Visions of similar prosperity present themselves to his inflamed imagination. He knows that a gulf of infamy lies between him and the realization of the splendid picture. Nevertheless he takes the last desperate leap into the slough before him, and either sinks dishonored or rises up clutching the coveted prize, but covered all over with the filth of degradation, which, though he may endeavor to conceal it with the splendor of his fortunes, no subsequent cleansings can remove, save only the washings of regeneration. The number of our regularly educated physicians who sink to this depth of depravity is happily very small. Even those who may succeed to their heart's content in attaining practice and making money, find that, after all, this is poor compensation for their toils and privations. Exhausted by severe labors and loss of sleep; disturbed at meals or in the rare enjoyment of social pleasures; breasting the storms of winter or sweltering in the summer sun, fretted by jarring professional views, adverse interests, the reproaches of discontent or disappointment, the misrepresentations of malice or envy, can the practitioner, thus suffering from mental or bodily discomforts, find satisfactory compensation in the mere swelling of his hoard of dollars? If this were his only source of comfort, he would be wretched in the midst of accumulation. There is something else necessary, and this can only be found in the consciousness that he is discharging a high duty, and is thus laying up treasures where neither moth nor rust doth corrupt.

While I have endeavored to point out some of the evils of a purely mercenary spirit in the practice of medicine, it is not my intention to lead any one to undervalue the claims of the doctor to a just remuneration. The practitioner of medicine, as all other professional men, must live by his labor. He must earn from his profession the means of supporting a comfortable style of living, from the fact that he is necessarily the associate of men in the very highest walks of life. Some of the capital expended in qualifying himself must be repaid. Moreover, he is justly entitled to such an income as will enable him, after a successful career, when his health begins to fail, to withdraw from active duty with suitable provision for his family. Of course his compensation, then, must be on a liberal scale. In all communities prices arrange themselves as a

necessary result of existing circumstances. There are two evils necessary to be avoided, flowing from a selfish spirit, which have a bad influence on the profession. Under-charging is one, by which a mercenary doctor expects to build up a practice at the expense of his professional neighbors. This is justly considered by the majority of the profession as mean and discreditable, and those who notoriously practice on this principle lose more in the good opinion of their fellows and of intelligent men generally than they gain in a pecuniary point of view. The other evil is that of excessive charging, by which the physician not only brings discredit on himself, but the profession, and, in fact, though he may gain for awhile, is apt to lose in the end. In order to avoid these evils, physicians have endeavored to determine the correct charges for services in their several neighborhoods, any material departure from which would be regarded as not very creditable. We have somewhat considered the profession in relation to its ends, but there are other points of view in which it must be looked at by those who desire to fulfill its requirements and harmonize with its true character. As you know, it is universally ranked among the learned professions. More than a simple acquaintance with natural and physical science is necessary for the physician. He is expected, like other gentlemen of liberal education, to know something of history, to be conversant with great deeds and characters, with those things which have influenced the course of events, with the great productions of genius in philosophy, literature and the arts. He is expected to manifest an acquaintance with the existing condition of the world, of men and their distribution, the earth's divisions and its products, international relations, the science of government, the condition of science and learning, the great industries of manufactures, agriculture and commerce. Every gentleman claiming education is presumed to have paid more or less attention to these subjects, and gross ignorance of them would, as a rule, be considered as evidence of neglected culture and consequent incapacity for duties which, like those of medicine, especially call for the exercise of intellect. We must admit, however, that a doctor's professional abilities are often estimated by the vulgar by quite a different standard. They generally consider medical qualifications as a gift. They seem to have an idea that they come by nature, like supernumerary fingers and toes. A natural bonesetter takes precedence, in their estimation, of a Hamilton, Gross or an Agnew. A seventh son is a born doctor, and the seventh

son of a seventh son is a perfect miracle in the art of healing. The vulgar may be found among the rich as well as the poor, and a doctor who can inspire such a belief of his wonderful gifts may attain a lucrative practice, especially if he has the talent of a successful swindler, namely, the talent of humbug. But he would make a very unfavorable impression upon the thinking portion of the community. These, being ignorant of medicine, judge him by the attainments he may possess in common with themselves. If they find out that he is well-informed and has good judgment on subjects which they understand, and have reason to believe that he has been industrious as a professional student, they will generally be disposed to give him credit for equal proficiency in medical skill, and try to seek his aid when opportunity offers. Any doctor possessing general information stands a better chance of professional success than the mere pretender, and even if he should fail to gain a greater amount of practice, he certainly takes a higher position in the esteem of the community. Independently of his own satisfaction and self-respect, the possession of knowledge upon subjects connected with his professional pursuits, will have a special bearing on the opinion formed of him by others. Thus he is expected to know the progress of medicine, the source of drugs and the origin and spread of disease. There are a great many people, quite ignorant of medicine professionally, who have considerable information on such subjects, and are very capable of detecting a want of it in the doctor. Suppose, for instance, that some one of our young doctors should inform his hearers, in his rounds to his patients, or even tell our medical examiners, in answer to testing questions, that Galen discovered the antivariolous influence of vaccination; that Peruvian bark is produced in Labrador, and that Hippocrates was highly skilled in auscultation and percussion, what do you suppose would be the opinion formed of his real professional attainments? And yet, I doubt not, answers equally as absurd have been given by candidates for medical honors.

As yet I have only spoken of some of the humbler motives for the cultivation of general knowledge in connection with the professional. There are inducements of a still higher nature. Greater development is given to our intellectual powers; a wider field for the exercise of thought and expansion of all our better feelings, and, as a result of all these advantages, a more decided influence over ourselves, and of course a more powerful influence over the convictions, thoughts and

characters of others. But, while speaking of general mental culture, I would like to caution you against a course dangerous to your best hopes ; I refer to an exclusive or any obvious devotion to any branch of science or literature which may absorb your time and faculties, and withdraw, or seem to withdraw, them from your proper professional pursuit. Medicine will bear no rival in our affections or attentions. She is a jealous mistress and tolerates and even demands such accomplishments as will render her votaries more efficient in her service and reflect additional splendor upon herself. Her deepest frowns await those who acknowledge a divided fealty, or addict themselves preferably to another mistress. Even coquetry often draws down upon her professed votary a most withering indignation. There are few greater impediments to success in the practice of medicine than a real or seeming preferable addiction to some other branch of knowledge, even though it may seem collateral with medicine itself. Whether justly or not, the world will generally believe that labor and time must have been unduly abstracted from professional devotion, and will, as a rule, seek the aid of physicians who, though generally accomplished, have not allowed any other attachment to encroach upon their legitimate one. So, if we propose, as our great object in life, a wide field of professional duty, we must let it be clearly seen that such is our aim, and that whatever else we may have gained through opportunity or diligence, is to be made subservient to this end.

OIL OF TURPENTINE IN SCROFULOUS OZÆNA.—Malacrida (*Gazz. degli Ospit.*, March 7, 1886 ; "*Centbl. f. Chir.*," July 17, 1886) reports the case of a girl ten years old who had ozæna of long standing, which had long been under treatment in vain. Taking a suggestion from the cure of old fistulous tracts with oil of turpentine, the author used this drug locally, and gave the patient a supporting diet. Cotton tampons, moistened with a few drops of the oil, were introduced into the nose. As they caused considerable irritation, those subsequently used were wrapped with dry cotton. A perfect cure took place in a week. Five other cases treated by the same method are mentioned, in none of which was the cure delayed longer than a month.—*New York Medical Journal*.

SELECTED PAPERS.

REPORT OF EIGHT CASES OF INTUBATION OF THE LARYNX FOR CROUP (O'DWYER'S METHOD).

By WM. P. NORTHRUP, M.D., Pathologist to the New York Found-
ling Society.

In the following cases it has been the aim of the writer to have each patient examined by one or more physicians of recognized merit and position, who are prepared to vouch for the accuracy of this report :

Case 1.—Gussie B., aged five years and a quarter, a sister of the one the report of whose case was published in this Journal for April 3, 1886, also a patient of Dr. R. N. Disbrow. Died.

April 18, 1886.—She awoke with croupy cough, and there was a diphtheritic exudate on both tonsils.

19th.—There were aphonia, croupy cough, croupy inspiration and expiration, the countenance was anxious and dusky, restlessness and recessions were extreme, and there was absence of vesicular breathing behind.

4th, P. M.—Dyspnœa was urgent, and a tube was inserted in presence of Dr. Disbrow. Relief was immediate and complete. Examination five minutes later showed vesicular breathing clear and low-pitched over both lungs behind, with a few crepitant râles at the base of the left lung. In five minutes more the patient slept quietly. Six hours later respiration was rhythmic, but varying in depth—first a deep breath, then shallow and shallower, then deeper and deeper, and so on.

The urine showed albumin, hyaline and granular casts. Pulse 144; respiration 61; temperature 103.4° in the rectum.

20th.—She slept much and took milk reluctantly. Pulse 144 to 168; respiration 40 to 50; temperature 103° to 103.4° in the rectum.

21st.—She was very restless during the night. Refused milk. Respirations were loud and noisy.

She died at 5 a. m. No autopsy was allowed. Cause of death, extension of diphtheritic process into bronchi.

The tube was removed after death, and found perfectly clear.

Case 2.—Mamie B., aged five years, a patient of Dr. O'Brien. Recovered.

May 19, 1886.—There were epistaxis and croupy cough.

21st.—There was a diphtheritic exudate on both tonsils.

22d.—There were dyspnœa, croupy inspiration and expiration, restlessness, recessions, absence of vesicular breathing over both lungs behind. A tube was inserted, with immediate relief of dyspnœa. Vesicular breathing, low-pitched, was heard over both lungs; color clear; respiration easy and quiet. Five hours later she had slept several hours, and had taken milk freely, with little coughing. Pulse 140; temperature 100.5° in the rectum.

Albuminuria was present.

25th.—The pharynx was clear of exudate. She slept well and coughed moderately.

27th.—The tube was removed, after having been in five full days.

Fifteen days later she talked and sung, and seemed quite well.

Case 3.—Charles L., aged three years and nine months, patient of Dr. Saunders.

May 17, 1886.—He was hoarse, had a croupy cough, and there was a diphtheritic exudate on both tonsils.

19th.—Tonsils clear.

22d.—Inspiration and respiration croupy. There were marked restlessness and recessions. Pulse weak and lost at the wrist at the moment of inspiration. Temperature 98.5° . Dyspnœa urgent. A tube was inserted, with immediate relief.

23d.—Pulse 164; respiration 62; temperature 100.6° .

At 3 P. M. he coughed the tube out during a hard paroxysm after taking milk. The tube was reinserted after three hours, in which time the dyspnœa had again become urgent.

8 P. M.—Pulse intermittent, 128, while sleeping; respiration 36.

24th, A. M.—Pulse 128; respiration 46; temperature 102.5° in the axilla.

P. M.—Pulse 140; respiration 44; temperature 103.8° in the axilla.

25th, A. M.—Pulse 144; respiration 48; temperature 102° in the axilla.

P. M.—Pulse 168; respiration 54 to 64; temperature 101° in the axilla.

26th.—He died at 4 A. M. from extension of membrane to the bronchi.

No autopsy. The tube on removal was found clear. The tube was in the larynx three days and a half.

Case 4.—Recovered. Willie W., aged three years and nine months, a patient of Dr. H. A. C. Anderson.

May 28th.—There was cⁱphtheria of the pharynx.

June 1st.—There was croupy cough.

4th, A. M.—The child was very restless, tossing about; there were loud, harsh inspiration and respiration; marked recessions; the countenance was anxious, and the color dull, pale. There was a diphtheritic exudate on the tonsils. Dyspnœa became gradually very urgent, and vesicular breathing was absent or in the chest behind. A tube was inserted in the presence of Dr. Anderson. Relief was immediate and complete. After ten minutes the chest was again examined. Vesicular breathing was found to be clear, dry and low-pitched. The child went to sleep quietly on lying down, with respiration inaudible, at the foot of the bed. Pulse 132; temperature 100° in the axilla.

5th.—Albuminuria was present.

6th.—The tube was coughed out forty hours after its insertion. The patient was seized with violent coughing while drinking. Dyspnœa was not urgent, but it was thought best to remain at hand during the night and await the result. It was not necessary to reinsert the tube.

Milk was swallowed easier after the removal of the tube.

7th.—The Pharynx was clear of exudate.

12th.—Voice had returned strong and loud, though a trifle hoarse.

The child made a good recovery aside from an abscess below one ear. This case was watched by five physicians, whose names appear sooner or later throughout the report.

Case 5.—Died. Willie B., aged five years ten months, a patient of Dr. Elmer.

June 4th.—He was playing in the yard, when he began to suffer from headache and fever.

6th.—Diphtheria of the pharynx was well marked.

9th.—There was croupy cough.

10t.—There were croupy inspiration and expiration.

He slept none last night, was restless, the dyspnœa gradually be-

coming more and more severe ; there were marked recessions, and the respiratory murmur was absent over the whole of the chest behind. Respiration was loud, harsh and croupy, and the pulse was rapid, feeble and intermittent.

A tube was inserted in presence of Dr. Elmer. Relief from dyspnœa was immediate and complete. He coughed moderately. Good vesicular breathing was heard over the whole chest behind, the pitch was low, and there were but few subcrepitant râles. In ten minutes the child lay on the bed and slept quietly for two hours. Nine hours after the insertion the pulse was 148, intermittent.

11th, 5 A. M.—Pulse 136 ; respiration 34 ; temperature 102.5° in the rectum. Epistaxis and albuminuria were present.

10 A. M.—Pulse 140 ; respiration 44 ; coarse râles were heard at the root of the lungs.

12th.—Pulse 140 to 152 ; respiration 27 to 38 ; temperature 103° in the rectum.

13th.—Pulse 148 to 152 ; respiration 54 to 58 ; temperature 102.6° to 104° in the rectum.

The pulse was intermittent, the hands and feet were cold and clammy. During the day distinct bronchial breathing was developed at the base of the right lung.

14th.—Temperature 105° in the rectum. He died with distinct signs of pneumonia. The tube was found clear on removal. There was no autopsy.

Case 6.—Died. Adna H., aged seven years, a patient of Dr. Bradshaw.

June 9th.—There was a well-marked exudate of diphtheria on the tonsils and velum.

10th.—There were croupy inspiration and expiration.

11th.—Dyspnœa was increasing gradually, and in the afternoon it was urgent, and there were marked recessions. There were a harsh, dry, croupy cough and respiration. The patient had been exceedingly restless for twenty-four hours. A tube was inserted in presence of Dr. Bradshaw. The patient coughed severely and expelled much tenacious mucus, then fell into a quiet sleep. She took milk with very little difficulty.

8 P. M.—Pulse 168 ; respiration 132 ; temperature 104° in the rectum. After a refreshing sleep, she sat up and drank a cup of

milk without difficulty, then suddenly dropped on the bed dead. There was no autopsy. Death resulted from heart-failure. The tube was clear on removal. The pulse from the first was poor and stimulants were given freely.

Case 7.—Freddie B., aged five years. Died. The patient was seen with Dr. Macgregor.

June 10th—He was feverish and there was a croupy cough.

12th—There was a well-marked exudate over the tonsils, rapidly spreading upon the walls of the pharynx. There were croupy inspiration and expiration. Pulse 108 to 112; respiration 28; temperature 101.2° in the rectum. The pulse was regular and strong.

3 P. M.—There was an exudate on the tonsils, velum and post-pharynx rapidly spreading. Dyspnœa was urgent, there were marked recessions and restlessness. Examination of the chest showed entire absence of vesicular breathing and no râles. A tube was inserted in the presence of Dr. Macgregor. Relief was immediate and complete. Sleep followed in ten minutes.

13th.—Pulse 120 to 132; respiration 32 to 36; temperature 103.5° in the rectum. The patient was restless and refused milk; pulse intermittent. The exudate was still further extending, and the pharynx was very much swollen.

11 A. M.—Pulse 140 to 148; respiration 52 to 56; temperature 103.5° in the rectum. There was no albuminuria.

1 P. M.—Respiration 45; temperature 104.8° in the rectum. Vesicular breathing was indistinct, and there were low-pitched sub-crepitant râles.

8:30 P. M.—Respiration 50; temperature 105.2° in the rectum. There was no albuminuria.

The patient died apparently of the severity of the diphtheria. There was no stenosis and no pneumonia. No autopsy was made. The tube on removal was clear.

Case 8.—Recovered. Robbie W., aged one year eleven months. Patient of Dr. Anderson, and a brother of the patient whose history is given in Case 5.

The patient became hoarse the day on which Case 5 was operated on.

June 15th (eleven days later).—His hoarseness developed into dyspnœa; diphtheritic exudate appeared on the tonsils and uvula.

On June 15th the dyspnœa became more marked, slowly and

gradually becoming severe, and at length urgent. Restlessness was extreme, there were marked recessions and absence of vesicular breathing behind. A tube was inserted in the presence of Dr. Anderson and Dr. Bleything.

Dyspnœa was at once relieved and fully, vesicular breathing was restored, there were no râles, and the pitch was low.

In fifteen minutes the child was sleeping quietly.

16th.—He had slept all night and much of the preceding day. Pulse 120; temperature 100.4° in the rectum. Albuminuria was present.

His condition remained good for six days, when the tube was removed. The child made a good recovery without any complications.

Of nine patients operated on, four have recovered.

Of the four who recovered, all had diphtheritic exudate in the pharynx; all were suffocating from laryngeal stenosis; all had these symptoms: restlessness, recessions, absence of vesicular breathing behind and albuminuria. Each patient was examined by two physicians, most of them by more than two, and one by six physicians.

Of those who died, two died of extension of the exudate into the finer bronchi—bronchial diphtheria—but died before pneumonia had developed.

One developed well-marked pneumonia.

One died of sudden heart-failure.

One died of malignant diphtheria.—*New York Medical Journal.*

A PATIENT has died at Bellevue Hospital who fired seven shots into himself with a 22-calibre revolver at the Grand Union Hotel, but in whose case, owing to the prompt and skillful interference of one of the house-surgeons of the hospital, life was prolonged for two weeks, and it was even thought for a time that there was an excellent chance of recovery. Five of the wounds were serious, and two of them were especially dangerous; one of the balls being fired into the top of the head, fracturing the skull, and another into the throat, severing the larynx. For the relief of these, trephining and tracheotomy were performed at a single sitting.—*Boston Medical and Surgical Journal.*

ON THE PRINCIPLE OF TRACTION-RODS, WITH A SIMPLE SUGGESTION APPLICABLE TO ANY FORCEPS.

By WILLIAM STEPHENSON, M.D., Professor of Midwifery in the University of Aberdeen.

The addition of traction-rods to midwifery-forceps marks an epoch in the process of their evolution. The credit of the conception is due to Tarnier ; and, though his special form may be superseded, yet the profession will ever be indebted to him for the idea. They may as yet be imperfect in form, but it is not likely that the principle will be given up. Certainly no other modification has attracted so much attention, and been adopted in special cases by men of different schools in all parts of the world. Whatever objections may be brought against his forceps, the opinion that they possess some advantage over the ordinary instruments is too general amongst those who have tried them to be ignored. In what does this advantage consist, or what is the principle involved in traction-rods ? becomes an important question.

For myself, I must admit that the objections I entertain to Tarnier's forceps have prejudiced me against them. I still hold that they are too cumbrous and complicated to meet the wants of the general practitioner ; that their method of use implied in the term axis-tration is delusive and wrong when applied generally ; and that we lose much of the power and information of the skilled tactus when we relinquish the hold of the handles proper, and draw only by the rods. Experience in their use has, nevertheless, taught me that they embody an important principle, which brings the forceps nearer to the ideal of what they should be.

In comparing the action of traction-rods with that of the ordinary curved forceps, Tarnier and his followers do not state the subject accurately. They have assumed that the power is exerted always by simple traction, and that in both cases the force can be represented by a straight line. This is true for traction-rods only ; it does not correctly represent the mode of using the ordinary forceps. With them it may be possible, in very easy cases, to deliver the head by simple traction ; but, whenever the resistance is considerable, there is, consciously or not, on the part of the operator, always

a leverage or straining effect by the hand, whereby the action is rendered compound, one force drawing in the line of the handles, and others acting as a couple, whereby the force is directed in the line of the axis of the blades. The resultant, therefore, cannot be represented by a straight line, but by a line and a couple; and the recognition of this fact is essential to the understanding of the principles of traction-rods. The difference between Tarnier's and ordinary forceps is not between direct and oblique traction; but between simple traction and a leverage or straining action, where the fulcrum can never be a rigidly fixed point. Dr. Albert Smith (*Transactions of the American Gynecological Society*, Vol. VI., 1881) advocates the leverage method, pure and simple, without traction; generally, however, the two are combined, and in difficult labor it is impossible with the ordinary curved forceps to deliver the head without some degree of leverage or straining.

In discussing the subject, it would be well were all agreed as to the essential requirements in an ideal pair of forceps. These, to my mind, are the following:

1. They should provide a secure hold, which gives full command over the head. It is not sufficient that the hold does not slip, but the command also over the head must be good. For this purpose, we must be able to apply the blades to the head, in whatever position it may be, so that the force passes through the centre, and acts equally on all parts. Such a hold, having been obtained, should not be disturbed. The pelvic curve in the forceps is necessary to accomplish this when the head is at the brim.

2. Prehension should mainly be dependent upon the cephalic curve, with a minimum amount of compression. To maintain the perfect action of the blades in this respect, it is necessary that the line of traction should coincide with the axis of prehension of the blades. In proportion as traction is made out of the axis of prehension, the forceps are liable to slip, and increased compression is necessary to counteract this, and retain the hold. In order to permit a variation in the line of traction, it is advisable that the fenestra should be of sufficient width.

3. The forceps should be such that the extractive force can be exerted in any desired direction by simple traction only, and free from all strain upon the hand of the operator or on the foetal head. With an instrument such as the forceps must necessarily be, force

can be always applied more directly and accurately and more savingly by simple traction, than by a combination of traction and leverage exerted by straining with one hand, or operating by two hands through a rigid rod. Simple traction, skilfully adjusted, is the safest and most saving mode of action.

4. The forceps should afford facility of varying the line of traction, when necessary, without disturbing the hold and command over the head. This condition cannot be accomplished by simple traction, with forceps which, when applied, form a rigid rod. With such an instrument, a change in the direction of the force can be accomplished only by a change in the position of the blades, or by the leverage action of the hand. To effect the change by simple traction only, the instrument must be composed of two parts, one movable upon the other.

The question between the ordinary forceps and traction-rods turns on the means of adjusting the line of traction ; but, whilst Tarnier and his followers have limited themselves to the axis of the pelvis, and mainly directed their attention to the head at the brim, the means devised have a much more extended application. By the prominence given to the opinion that traction should in all cases be made in the line of the pelvic axis, the true principle of the use of traction-rods has been obscured, and placed on too narrow a footing. Direct axis-traction is all that is required in simple cases where the resistance is offered by the soft parts alone ; but it is quite insufficient in difficult delivery, where not only is the normal mechanism changed, but the resistance is greatly increased by malposition of the head, or by contraction of the pelvis.

Men may deceive themselves, and imagine that they are drawing directly in the line of the pelvic axis ; but how can this be ascertained more than in a general way ? It is certain, also, that the true line of action in difficult labor often lies out of the direction proper in the normal pelvis and head. Every skilled operator keeps the pelvic axis in view ; but, consciously or not, the tactus leads him independently to adjust the direction of the force, altering it from time to time to meet the requirements of the case. It is not alone when the head is at the brim that traction is required out of the normal line, but also when the head is well in the pelvis, if its position be faulty. It is not, then, direct axis-traction alone that we must aim at, but skilfully adjusted traction ; we must be able to

vary the direction when necessary, and the question to be determined is, what is the best mode of obtaining the means of readily altering the line of traction without diminishing the command over the head or rendering the forceps liable to slip?

The pelvic curve in the forceps is necessary to obtain a proper hold of the head when it is at the brim, but it diminishes the power of simple traction, and necessitates the use of other means to obtain the proper direction of the force. In the straight forceps the line of traction supplied by the handles coincides with the prehensile axis of the blades, and thereby a good hold of the head is secured with a minimum amount of compression. But when the pelvic curve is introduced, the two no longer lie in one line, but are inclined to each other at an angle. The greater this angle, the more is the power of prehension and simple traction diminished. The defect, so far as the hold is concerned, is readily compensated by additional compression, whilst the defect in the line of traction is corrected by a leverage action of the hand. In easy cases, so long as the resistance is not great, the amount of compression is not such as is likely to be injurious to the head, nor is the strain on the hand so great as materially to limit the power. The instrument answers fairly well, and is sufficient for the majority of ordinary cases. But when the resistance is great, the defects become apparent. The amount of lever action becomes too much for one hand, and both are brought into requisition—one one way, the other another. The strain, moreover, is not confined to the operating hands alone—it is conveyed to the foetal head. In the efforts to adjust the traction the handles are carried backwards, straining the pressure or altering the position of the blades; the command over the head is lessened; and not unfrequently, when the strain is great, the forceps slip.

Another means of correcting the defects of the ordinary forceps is to give to the handles a curve complementary to that in the blades, as in Aveling's forceps. This, however, only restores the line of simple traction to that of the axis of prehension. It does not meet the fourth requirement described above, of affording the means of varying the line of traction without straining or otherwise disturbing the grasp upon the head.

With all forceps which, when applied, form, so to speak, a rigid rod, the line of simple traction can be varied only by altering the position of the blades or moving blades and head together. A change in the

position of the blades does not necessarily imply diminished command over the head, yet in some cases this must undoubtedly happen. With the other resource, that of turning the head with the blades, the movement may occasionally be advisable, but generally it would certainly derange the mechanism of the labor. It is important, therefore, that we should have at our command, when resistance is great, some other means of adjusting the line of traction than that supplied by the handles of the instrument. This means for facility and accuracy in the adjustment must be movable upon, and not a component part of, the rigid instrument. The requirement is met by adding a separate traction-rod, freely movable upon the forceps proper.

All the forms of traction-rods which have as yet been devised are open to the serious objection that they greatly complicate the instrument; some simpler means is most desirable; and it would be a further recommendation if it could be applied to any form of the forceps, and be used or laid aside, as desired. This, I would suggest, is to be found

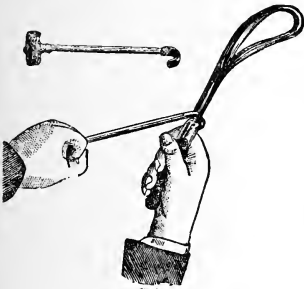


Fig. 2.

in a simple hook, such as is here figured. What I first employed was the ordinary crotchet and blunt hook combined, using the crotchet end as the hook, and it answered very well. Held in the left hand, the tractor can, when wanted, be attached between the shanks and over the lock. With it so placed, and the right hand grasping the handles in the ordinary manner, traction is made simultaneously with both hands, the

right acting in the line of the handles, the left at a proper angle, so that the resultant will coincide with the line of the desired movement. The force can be thus exerted in any direction, and changed at any time, without affecting the hold of the instrument, or throwing a strain other than direct traction upon the foetal head. Perfect facility in the most delicate modification in the direction of the force is thus secured; simple traction without strain alone is used, whilst the means is simplicity itself, and can be used with any forceps. It is, I contend, a great mistake to relinquish the hold of the prehensile handles, as recommended by Tarnier and his followers. We thus lose much of the valuable information which is conveyed through the instrument to

the mind of the operator—that skilled tactus, the full value of which can be estimated by those only who possess it.

An objection may be advanced that the power is applied less directly than with Tarnier's rods, and therefore there is loss of force. Even if this be the case, it is certainly largely counterbalanced by the gain in simplicity. And, after all, does not this suggestion look very like what has before been advanced? It embodies the action to which many have recourse, when they use both hands with the forceps; but it defines more clearly the principle, and gives greater precision to the action. It recalls to mind the fillet over the lock, suggested by N. F. Nägele, in 1843; and the peculiar instrument of Herman, with a similar application. But the idea associated with these is what I would wholly discard—that of leverage; whereas what is sought for and specially insisted upon, in the use of the simple tractor, is direct traction only.

The chief question is, Does the plan fulfil the end in view? I have now used it in several difficult forceps cases, and am satisfied that I obtained with the simple tractor the same advantage I had found from using a modified Tarnier's forceps. In one case I have had the opportunity of comparing the two methods with the same patient, and therefore as near as possible under the same conditions. The first time I employed the late Dr. Macdonald's modification of Tarnier's forceps, the second, the ordinary Simpson's forceps with the hook tractor; the latter answered in every way as satisfactorily as the more complicated instrument. Those of my friends who have tried the tractor have reported favorably upon it. Experience alone will decide the relative merits, with the sure result of the "survival of the fittest."—*British Medical Journal*.

POINT OF DIAGNOSIS OF ROTHEN.—In the *Lancet*, April, 1886, p. 785, Dr. Glover says he has noticed the earliest symptom to excite notice in cases of rothen or German measles, is a swollen gland in the neck at the back of the sterno-mastoid muscle. This symptom he has noticed four or five days before the rash appears. When disease is prevalent, or already exists in a family, and a swollen cervical gland in a young person appears, without obvious reason, it may be suspected that the system is already infected.—*Southern Practitioner*.

THE EFFECTS OF MILITARY DRILL ON BOYS.

By Prof. D. A. SARGENT, M.D., of Harvard University.

* * * * *

The consecutive action and harmonious relation of the nervous, muscular and vascular systems must accompany every effort to improve the physique and render the individual energetic, healthy and strong. How to attain this three-fold result is the problem that the instructor of physical training has before him.

If you lift your arm in this manner (flexing the arm at the elbow), it is because the biceps muscle contracts, but the fibres are not hard and tense, and there is little evidence of an increased circulation. This would be termed a movement—almost a passive movement—and is what might be first advised to restore efficiency to the arm of a paralytic, or to preserve a single group of muscles from atrophy. This is the basis of the Movement Cure as founded by Ling, of Sweden.

If you should contract the muscles of the arm rapidly and energetically, you would give exercise to nerve-centres and nerve-fibres, but the muscles would not be efficiently used, and the blood-supply would not be much augmented.

By pursuing this method the nervous system can sometimes be improved and the muscles made responsive, but activity will be attained at the expense of endurance. This is the basis of the Delsart system of physical culture now so popular in the schools of elocution.

Now grasp a heavy dumb-bell or weight in the hand, and elevate it slowly to the shoulder. In so doing you bring about an energetic action of the flexor muscles, but the nervous system is not especially active, and though the blood-vessels of the arm are gorged with blood, the circulation is not much improved. By pursuing this method the muscles can be increased in size and strength, but the individual, though strong, will lack heart and lung power, and be constitutionally weak. This is the result of the Heavy Weight System as formerly practised and advocated by Dr. Winship.

Now if the arm is alternately contracted and relaxed while using a lighter weight, the blood in the arteries is pushed forward into

the veins, and through the veins into the heart. When it arrives at the heart, that organ is stimulated to contract with greater energy, and a proportionally greater amount of blood is sent back to the arm. In following this course, the blood-vessels in the parts used would be greatly increased in size and capacity, but in case many muscles were called into play at the same time, the brain and central nerve system would lack their due share of blood, and power to continue the effort for any length of time would be wanting. This, in a word, is the chief defect in the system of Light Gymnastics, advocated so fervently some twenty years ago by the late Dr. Dio Lewis.

These four methods of exercise, when elaborated and applied to the whole body, represent, I say, the fundamental principles of four great systems of physical training, each method being admirably adapted to meet the special wants of certain individuals, but wholly unreliable, and in many cases followed by fatal consequences when applied indiscriminately to all classes in the community.

To select at once a system of exercise that will do no harm to any one, and yet be beneficial to all, is a difficult task, yet we shall come nearer doing the greatest good to the greatest number if we follow what may be termed the physiological method. As near as I have been able to ascertain them, the essential requisites of a good exercise may be summed up in the following suggestions :

(1) The person should be sufficiently interested in the exercise to give it his attention in order to secure the necessary volitional power to start the movement. Any exercise executed in a lifeless way is of little benefit to nerve or muscle in a healthy condition.

(2) There should be a weight or resistance to overcome in order to bring out the working force of the muscle, the theory being that the muscles were not created merely to move the parts to which they are attached, but to do service and help man bear his burdens. In using a weight, the muscle gradually acquires the force with which it tries to contract.

(3) The exercise must be performed with sufficient vigor and rapidity to engage the energetic contraction of the muscles employed. When this is done, old tissue is broken down, and its place is supplied with new material in increased quantity, thus augmenting the size and strength of the muscles. The rapidity of the movement puts a limit to the weight used, and the alternate contraction and

relaxation of the muscles assists the circulation of the blood in the parts employed.

(4) As many muscles as possible must be brought into action in order to secure a full-orbed and harmonious development of the whole body. One-sided development is usually attained by robbing some other part of its just share of the body's nutriment. It is apt to be accompanied by a functional disturbance of one or more of the vital organs, by inducing malformations of the thorax, or it is likely to lead to the straining of parts that are weak, by gauging their strength by parts that are strong.

(5) A sufficient number of muscles should be called into action at one time to stimulate the action of the heart and lungs and increase the circulation and respiration. This is one of the most important considerations to bear in mind in regard to exercise. The more muscles a person can use at one time, and the more rapid and extensive the movement, the greater the muscular consumption of oxygen and elimination of carbonic acid. In order to sustain this activity in the muscles, a greater amount of oxygen must be taken in, and a greater amount of carbon-di-oxide must be given off from the system. This is accomplished through the respiration. "If a man walks one mile an hour, he breathes twice as much air as when lying down; if he walks four miles an hour, he breathes four times as much, and if six miles an hour, seven times as much." He takes out of this inspired air an increased ratio of oxygen, and eliminates nearly the same proportion of carbonic di-oxide during expiration. To keep up this increased respiratory activity and to aid the heart in removing the waste material and hastening forward the new, the limbs and walls of the chest must be absolutely free from any ligatures or constrictions. The slightest interference with the action of the respiratory muscles at this time embarrasses the functions of the lungs and heart. The chief advantage of exercises that give employment to many muscles at one time is that by increasing the respiration and quickening the circulation, they improve the health and strength of all parts of the body.

(6) As a "latent period" precedes the contraction of a muscle, so a momentary period of rest should, as far as possible, precede movement in exercise. This is best secured where there is an alternation in the movements, as in walking, running, rowing, etc. All tetanized movements, such as holding weights, standing in a constricted posi-

tion, etc., tend to impair the tone of the muscles by interfering with the nutrition of both muscles and nerves.

(7) The exercises of the young should be of such a composite nature as to bring about the coöperation and coördination of the muscles. This involves principally the training of the central nerve system. All gymnastic sports and athletic games that require skill, dexterity, coolness, courage and presence of mind, are included in this list, and are exceedingly valuable to any system of physical training, as adjuncts in the development of character.

My principal objection to military drill as a physical exercise is that it does not to any extent meet the physiological demands of the body as set forth in the seven observations just referred to. In other words, it is not of sufficient interest as a means of physical development to arouse any moral earnestness and enthusiasm on the part of the boys. The exercise of the manual is not performed with sufficient force and rapidity to engage the energetic contraction of the muscles employed. It is essentially a one-sided exercise, bringing into excessive action the elevators of the right scapula, the deltoid, biceps, flexors of the fore-arm, wrist and fingers of the right side, while the other muscles, excepting the legs on parade days, do not get sufficient employment to keep them in good condition. It does not increase the respiration and quicken the circulation to a sufficient extent to secure the constitutional benefits that should accrue from exercise.

During the drill the clothing is buttoned close around the chest, and natural respiration is hindered. The muscles are not alternately contracted and relaxed, but are tetanized or kept in a state of prolonged tension. This, as we have seen, not only impairs the tone of the muscles used, but it also puts an additional strain upon the brain and nervous system at a time when both should be as much relieved as possible. Finally, the mere exercise of the manual of arms does not give sufficient breadth and scope of movement to secure the coöperation of the muscles, and as a training for the central nerve system, it is of little or no value.

Coolness, courage, presence of mind, and that rapid and responsible exercise of judgment in emergencies, so valuable to the man of business, as well as to the soldier, are not developed by the drill itself, though I will admit that other moral attributes, such as obedience, patience, fortitude and forbearance, may be brought to a

high degree of perfection. The community at large have long entertained the idea that there was something about military drill that made young men erect, or, as the committee have been pleased to term it, giving them a graceful and manly bearing.

I dislike to take from the drill one of the strongest attributes that has commended it to parents and teachers, but unless I have been misled in my observations, there is nothing in the drill itself that tends to make one erect or graceful. On the other hand, I am prepared to maintain that it tends to make him stiff and angular in his movements, as well as to droop and round his shoulders.

This fact was long since brought to the attention of military authorities, and a set of calisthenic exercises or free gymnastics have been incorporated into all of the treatises on military tactics, to correct this tendency. I refer to what is familiarly known as the "setting-up" drill. Upton says, in his manual of "United States Army Infantry Tactics": "As the importance of 'setting up' cannot be overestimated, the exercises must be often recurred to, and all soldiers will be frequently practised therein."

Notwithstanding this recommendation, I have yet to learn of a single military school in this country, the National School at West Point excepted, where these exercises are practised assiduously. They are irksome and unpopular, like all corrective measures, and are consequently never insisted upon.

There is another method, commonly known as "tailorizing," by which youthful soldiers may easily acquire a full chest, square shoulders and a straight back. The results may not be as enduring, but they help out on parade day, and undoubtedly contribute something to the "manly bearing" that is so often spoken of. The moral is: Do not waste your admiration over the military figure until you see it with its coat off.

In reference to the gracefulness that is thought to characterize the movements of young cadets, I can only say it is not the outcome of drilling and marching. The soldier is trained to square corners, straight platoons and angular movements. Curves and embellishments are not encouraged in speech or in action. If you would account for the graceful poise of our national cadets, you must visit West Point in summer, and see them from one to two hours a day in charge of the dancing master.

Having considered at some length what the drill does *not* do for

boys, let me invite your attention to a brief consideration of some of the things that it does do. Here let me forestall any impression that my previous remarks on this subject may have left, and state that I do not think that military drill, as conducted in the Boston schools, is injurious to a strong, full-grown healthy boy, except in a negative way. That is, it does not furnish him the physical training he needs for the maintenance of vigorous health, and the acquisition of a complete or symmetrical development. But those of you who have had the pleasure of examining school-boys, or of looking over their measurements or photographs, will bear me out in saying that the strong and well-developed boys are largely in the minority.

The pupils attending our public and private schools represent nearly every phase and condition in life. Some are well nurtured, others not. Some have favorable hygienic surroundings at home, others are subjected to unhealthy influences. All bear the stamp of a good or bad inheritance, and the strong and weak points of the parents show themselves in the physique as readily as they do in mental characteristics.

As no two minds are alike, so no two bodies are alike. But growing out of this great diversity of shapes and sizes, there is a figure around which nature tends to range those of a certain age, height or weight (according as either is taken for the standard). This is termed the mean or typical boy for a given age, height, etc. Any marked divergence from this standard is readily detected by a casual observer. My attention was long since called to what I think may be termed the prevailing weaknesses or defects in the school-boy's and student's physique.

These are a drooping of the head, flatness of the chest, narrowness of the waist and an exaggeration of the normal or physiological curves of the spine, and I might add to this number, though it is not quite so common in boys as in girls, lateral curvature of the spine. These defects, I say, are so apparent, that it does not take a practised eye to detect them. They attract the attention at once of any one who cares to examine the figures.

The drooping of the head and flatness of the chest may be accounted for by the increased prevalence of myopia, tightness of clothing and the pressure of the school-desk or table on the lower ribs and sternum. The hollowness in the back is partly due to the fact that it is a compensating curve, but more probably attributable to the weakness of the trapezii, rhomboidii, serrati and latissimus dorsi muscles.

The smallness of the waist is undoubtedly largely due to inheritance, and to the fact that the youth of the present day make very little use of the muscles of the waist and loins. Lateral curvature of the spine may be caused in many ways : by defective seats, bad positions in writing and drawing, standing for a long time on one leg, carrying weights, or using one arm more than another, etc.

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If it is deemed advisable to make military drill a department of school instruction, I see no reason why a system of corrective exercises cannot be introduced as an accompaniment. If, on the other hand, military discipline alone is required, this can easily be applied to a system of class gymnastics or free exercises, as shown in the schools of Germany.

After taking the most favorable view possible of military drill as a physical exercise, we are led to conclude that its constrained positions and closely localized movements do not afford the essential requisites for developing the muscles and improving the respiration and circulation, and thereby improving the general health and condition of the system. We must further conclude that in case of any malformation, local weakness or constitutional debility, the drill tends, by its strain upon the nerves and prolonged tension on the muscles to increase the defects rather than to relieve them.

Finally, if the ultimate object of the drill was to prepare young men for the life and duties of a soldier, we should be forced to conclude that the drill itself would still be defective as a means of developing the chief requisites for men in that profession.

This defect, we are pleased to state, is recognized by the great military nations of Europe, and measures are taken to give all the recruits from three to twelve months' gymnastic training to develop them as *men*, before they are expected to conform to the requirements of the soldier.—*Boston Medical and Surgical Journal*.



The *British Medical Journal* tells of a scybalum so large that, in order to extract it, it was necessary to give the patient chloroform and apply Simpson's short forceps. The patient, a woman, suffered from delusions which appeared to be due directly to the intestinal accumulations.

HEALING UNDER BLOOD-CLOT.

One of the most interesting papers read at the last Congress of German Surgeons was by Schede, of Hamburg, in which he gave the results of his experience with a plan for securing the healing of wounds, which is diametrically opposed to the general idea in regard to the management of blood-clots. It is usual to regard these as among the most inauspicious of foreign bodies, and to regard their removal as indispensable to prompt and successful healing. Since the general use of antiseptics, it has been frequently observed that the presence of a clot may not do any harm; that, in fact, the clot may become organized. Observing this fact, Schede has boldly made use of the blood poured out into a variety of surgical wounds to secure a protecting covering, which has the advantage of doing away with the necessity for drainage or compression. In the operation of Phelps for club-foot—open division of all the contracted soft parts, down to and including the astragalo-scapoid ligament—he found that if he simply covered the gaping wound with a bridge of protective silk, placed over this a good antiseptic dressing, and secured fixation with plaster bandages, he could leave the wound to itself without concern; and that, after three or four weeks, there would be solid cicatrization, or only a short, narrow strip of granulation, or a little strip of leather-colored clot, still attached along the middle, as the sole remains of the large mass of blood which filled the wound immediately after the operation. In this way not only does the skin unite, but all the soft parts—muscles, tendons and ligaments—assume their normal functions. In manner similar to this, Schede found a very large number of operations to heal without mishap. Of these he gives a list comprising 241 operations, including 40 resections of joints, with 37 typical recoveries; one resection of a piece of the wall of the thorax as large as the palm of the hand, with typical healing; 18 operations in which he chiselled out tuberculous foci in bone, with free opening of the joint, all with typical healing; 29 cases of removal of necrosed bone, with 27 typical recoveries; 20 open operations for club-foot, all with typical healing; 10 operations of scraping off of fungous granulations of the sheaths of tendons, with suppuration in only 2 cases; 24 cases of removal of tumors, with slight suppuration in

only two. In one case he saw a large blood-clot become organized in the lacerated brain, after a severe complicated fracture of the skull; and once, in a fracture of the elbow-joint, in which he had to make a deep incision into the joint, to relieve tension, the wound being about nine inches long and three inches wide, the blood-clot remained in place for over three weeks, until the fracture was consolidated.

The method pursued in securing these extraordinary results was, where possible, to employ Esmarch's bandage, to observe the most scrupulous asepsis, and to remove every portion of diseased tissue. Large wounds were closed with sutures, placed at such intervals as to leave only one or two openings about half an inch long, to permit the escape of superfluous blood into the dressing. In some cases a counter-opening was made for this purpose. Schede found that the skin united well over considerable cavities, such, for example, as are left after an operation for necrosis, and that unsutured wounds, like that after Phelps's operation for club-foot, healed equally well. No drainage-tube was used. The wound was covered with a piece of protective for two purposes: first, to secure complete filling of the wound with the blood-clot, and second, to keep this moist by preventing its absorption by the dressings, which were only intended to absorb the excess of blood. Over all was placed a thick antiseptic dressing of sublimate gauze and cotton, and sublimate moss bags. It is important, in order to secure the filling of the wound with blood, that when a counter-opening is made, it shall be at the highest point, instead of, as usual, at the lowest. In regard to the control of hemorrhage, when no large vessels were wounded, and the bleeding was not profuse, no account was taken of it. Arteries of any size were ligated, of course, and the filling of the wound was left to the parenchymatous bleeding.

Perfect asepsis is indispensable to Schede's method. If any doubt exists in regard to having secured it, he advises filling the wound with antiseptic material, such as iodoform gauze, or sublimate gauze, or bismuth, and leaving it till granulation is established, after which the filling of the wound with blood can be secured by shaving off the granulations, and the cure will be hastened materially.

Schede is convinced that this method will soon secure many friends, because of its great convenience, and because it secures the safest, quickest and most perfect healing, and often the most perfect

functional results. The knowledge of his success will go far to fulfil this expectation, which will be aided by reflection upon facts which must have been observed by many a surgeon who has been already compelled to act as he has done without any well-defined purpose, such as prompted Schede to adopt and recommend this as a general method; for which reason it may well be called by the just and convenient name of "Schede's method."—*Medical News*.

ANTIPYRIN AS AN ANALGESIC IN HEADACHE.

Dr. John Blake White, Physician to Charity Hospital, New York, sends us the following:

"The high road to truth is the knowledge of facts, and well is it for searchers after truth when facts can be ascertained and carefully recorded.

"Symptoms are the alphabet, cases the language, of disease, and that physician subserves his profession who carefully records his experience.

"During the past two years I have abundantly tested the therapeutic value of the drug known as antipyrin in various forms of headache. The prompt relief obtained through its use compels me to accord to it a high rank among our medical resources. I have already called attention (*Medical News*, July 10, 1886) to the potent antipyretic power possessed by this remedy in the management of various forms of fever, and have observed that, after its administration, the urgent symptom of headache, so uniformly present in these cases, was soon controlled.

Antipyrin undoubtedly possesses bradycerate properties in a high degree, as the pulse is notably softened and moderated in frequency soon after a proper dose of it has been taken. It produces some somatic change favorable to a reduction of the pulse in cases of fever, and so exerts a calming influence upon the vaso-motor system. The capillaries, through its agency, doubtless dilate, and local congestions are dissipated, as the relieved patient usually sinks into a refreshing repose soon after its exhibition. In the course of large experience with antipyrin I have found that, when administered in

masterful doses, it not only promptly relieves the symptom of headache whenever present, whether resulting from disordered digestion, disturbance of the menstrual functions, loss of sleep, undue mental effort, or even that associated with dreaded uræmia, but also possesses reliable prophylactic virtues against recurrent attacks of cranial neuralgia. So confident am I of the power of this remedy to disappoint neuralgic headache when imminent, that I have instructed many patients who are liable to such visitations, to keep in readiness and take a dose of antipyrin as soon as they have premonition of its recurrence, and all so far testify in favor of its efficacy.

“The value of this remedy in the above respect has not only been tested in my hospital and private practice, but I also record the fact that it has proved successful in the hands of professional friends, upon whom I had urged its employment for the relief of neuralgic affections of the head and face. I have been singularly impressed with the promptness of relief which often followed the administration of even a single dose of fifteen grains of the antipyrin. The grateful relief from headache usually ensues within half an hour after the drug is taken. A sense of drowsiness ordinarily supervenes, followed by a brief, but sufficient slumber, and the patient awakens quite relieved of this distressing symptom. I have never yet seen the sleep-disposing properties of antipyrin alluded to by any other observer, although this effect seldom fails to ensue when a full dose such as I have named has been taken.”—*Medical Record*.

DREAMS OF THE BLIND.

Dr. Joseph Jastrow, in the annual meeting of the American Association for the Advancement of Science (*Medical News*, Philad.), says :

“Almost all dreams of normal persons are sight dreams, and a dream is often spoken of as a vision. The blind are deprived of this most important sense ; but if they have not been born blind, they may remember enough of what they have seen to enable them to imagine how things look, and, when the imagination has free

play in sleep, to picture themselves as in full possession of all their senses. Physiologists would explain this by saying that during the years in which they saw, a certain part of the brain has become educated to receive and interpret all these messages which the eye sends, and that, when this part of the brain acts spontaneously in sleep, the person dreams of seeing. Such a portion of the brain would be called the sight-centre.

“If, now, we find out the latest age at which blindness may set in, and yet the person keeps on dreaming of seeing, we will find out the time it takes for this sight-centre to develop; for, of course, it is not present in the new-born infant. For this purpose about two hundred blind persons of both sexes were questioned at the institutions for the blind in Philadelphia and Baltimore, and it was found that those who became blind before their fifth year never dreamed of seeing; of those whose sight was lost between the fifth and the seventh year, some did and some did not see in their dreams; while all whose eyesight was destroyed after the seventh year had quite as vivid dream-visions as seeing people. The fifth to the seventh year is thus shown to be the critical period. This period corresponds with the age which authorities assign as the limit at which a child becoming deaf will also become dumb; and also with the age of one’s earliest continuous memory of one’s self.

“It is interesting to note that blind persons dream quite as frequently as people with normal sight, and that with those who do not see in their dreams, hearing plays the principal part. When dreaming of home, for instance, they will hear their father’s voice or their sister’s singing, and perhaps will feel the familiar objects in the room, and thus know they are at home. We, in such a case, would see it all.”—*Medical News*.


A WISE PRECAUTION.—Before undertaking an autopsy, Dr. Clevenger recommends holding the hands over strong liquid ammonia, when the smarting which ensues will reveal all sensitive or abraded places that need a touch of caustic or other protection before beginning the examination.—*Medical News*.

EDITORIAL.

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DIPHTHERIA IN THE MIDLAND COUNTIES.

The causation of diphtheria is so involved in mystery, and the solution of this puzzle is so necessary to the stamping out of this mortal disease, that all facts bearing upon its life-history are of pregnant value, to be useful, sooner or later, in the labors of the etiologist.

We have had an opportunity of hearing a detailed account of the outbreak of the disease in the counties of Caswell, Orange, Chatham, and probably of Moore, Montgomery and Richmond, as well as Chesterfield, in South Carolina, from an intelligent physician, whose practice is in the region of the first three counties indicated.

The autumnal exhibition of the malady has been preceded for quite a number of years past by an outbreak of malarial fever of the remittent type, beginning in January and lasting until June. These cases of fever have occurred generally among adults, and were rarely fatal, being amenable, after variable periods, to the anti-periodic action of quinine and the general treatment known and accepted as necessary to the cure of malarial fever, that is, active purgation with mercurial cathartics, quinine in doses as indicated by the severity of the fever, diuretics and simple febrifuge medicines as the practitioner may elect. Food and stimulation, generally alcoholic, are studiously administered in all cases, and the convalescence, varying in length, ends, with few exceptions, in complete cure. In July and August, in the same neighborhood where these malarial fevers have prevailed, and often in the same families, there appear typical cases of typhoid fever, with a varying mortality, the climax of the fever being attained about the first or second week in August, and the decline reaching its maximum about the first of September. And this latter month ushers in the cases of diphtheria. No county superintendent of health, as far as we know, has carefully studied these interesting details, and our informant, a busy practitioner, had not the leisure to gather comparative statistics of cases and deaths; but he says that so great has been the mortality in the fall months for several years that the people in the region which we shall allude to more particularly, are accustomed to regard the appearance of the disease in the household as so sure a harbinger of death that they have in most instances ceased to apply to the physician for advice, depending rather upon the practice of the country grannies and ignorant quacks, more to have the appearance of doing something for the relief of the sick ones, than with any hope of obtaining a cure. To use the expressive words of our informant: "They generally send for a coffin and not for a doctor." This relation of the ravages of this much dreaded disease may seem overdrawn, but we have heard of its progress, we might almost say, its long funeral procession, for a series of years, and are convinced that there is much of startling truth in it. Now, the surprising fact in connection with all the history of disease, malarial, typhoid and diphtheritic, is that it occurs on a high, gravelly ridge, well watered, with fertile valleys on either side of it, and inhabited by small farmers. There is no account obtainable of the

accumulation of manure-heaps, or human ordure in quantities sufficient to account for the manifestation of disease, which we are reliably informed exists. These infected regions (if we may so speak of a country that, to the casual observer, would seem a region where only pure air and good health, its offspring, could exist) are peopled by small farmers, as we have said, all of them hard-working people, with more or less thrift, and some education, such as the common country schools afford, but having only scant ideas of the necessity for a care to provide themselves with such sanitary surroundings as would be considered of a high class. In fact, we fear that, though there is much of the godliness of the sort that finds exuberant and genuine expression at weekly church services or the camp-meetings, but little of it has any relation except of a remote degree to that cleanliness that is proverbially akin to very godly-minded people all the world over, and the inculcation of the necessity for this improvement in their lives, illustrated by eminent example, will be a fruitful field of labor for the physician, the minister and the school-teacher.

Now, a word concerning the lay of the land that is occupied by this morbid host. As well as we can make out from the accounts we have been able to get together, this section may be described as beginning in the lower edge of Caswell county, running south-southwest through the western side of Orange county, about six or seven miles west of the town of Hillsboro, and down into the upper and northwestern portion of Chatham county, and thence on through the other counties named. This region of country is all ridge land, with a soil of gravel upon the red clay that holds through the first counties, with more or less granite and other dense rocks more or less closely underlying the arable soil. The water supply is excellent in quantity and character, and we have no good reason to suppose that the contamination of drinking-water is a considerable factor in the study of these outbreaks of diseases. But except for the fact that the appearance of malarial diseases in the earlier months of the year may be due to the opening of the soil by the plow in those months, there has, so far as we have learned, no good reason ever been assigned for the typhoid fever which follows the malaria, or the diphtheria which follows both. The endeavor of the county superintendents to solve the cause, and the prompt report of the whole matter to the State Board of Health, that this

arm of the public service may be utilized to save the people in these days of distress, is, it seems to us, the most practical work to which either the county boards of health or the general board can devote their energies.

LANOLIN AGAIN.

We have published the accounts of the new ointment base in several numbers of the JOURNAL, and we revert to it again to lay before our readers a summary of the paper on the subject read by Prof. Oscar Liebrich at the recent meeting of the British Medical Association, and which we take from the *Therapeutic Gazette*. He says that in the study of pharmacology things that will be of use chiefly in treatment of skin diseases have been most neglected ; and hence the importance of lanolin. Referring to the fact that this substance is a cholesterin fat, and differs from ordinary fat, chiefly in the absence of glycerin and substances which have properties in common with it, and in the presence of brilliant cholesterin crystals. It is a very stable chemical compound, and, as we have had occasion to show before, absorbs a little more than one hundred per cent. of water, the two becoming incorporated and forming a soft, yellow mass, which Liebrich calls the true lanolin, coming from the fat contained in the sheep's wool. An approach to the present form of the drug has long been known, as far back, certainly, as the days of Ovid, then and latterly called *œsypus*. But this failed to meet the wants which lanolin fills, because it contained rancid, fatty acids, and such has been the character of the other forms of *œsypus*. He advises that the lanolin "should be separated by centrifugal action from an emulsion sterilized by the action of heat and alkalies. Distillation will not answer, as it causes partial decomposition and an increase of the fatty acids. Made in this way, it is unnecessary to add any other fat to the lanolin to prepare it for use, as has been recommended.

REVIEWS AND BOOK NOTICES.

A TREATISE ON THE PRACTICE OF MEDICINE. By ROBERTS BARTON, M.D. Sixth Edition. D. Appleton & Co., New York, 1886.

The deserved popularity of this work is attested by the fact that the first edition was issued in 1880, that a second was demanded in three months, and that the others have followed them in rapid succession and been met by appreciative students always. The author says in his preface to this edition that he has sought to make it worthy of the approbation of his readers by increasing the practical resources of his work, devoting his attention chiefly to the clinical aspects of medicine, without overlooking the advances made in the scientific branch. To make his work complete, he has in preparation a volume to be devoted to a study of the "Principles of Medicine," making three in all; these are "Materia Medica" and the volume at present under notice, being well-known and received, and the third one indicated above soon to follow, to which the reputation of the author will insure a cordial reception. Our author, while accepting apparently the germ causation of disease, is prudent in his approbation of all of the theories of this newer school. The bacillus tuberculosis of Koch is not a universally admitted cause of phthisis, and, after a statement of the argument *pro* and *con*, in a concise way, he aptly remarks: "The attitude of the reflecting physician should be that of receptivity;" but warns against the conclusion that this parasitic nature of phthisis is approved.

The article on malarial fever is short, and contains nothing new. We hoped that we should find in this edition some of the author's careful study on the subject of malarial hæmaturia or hæmaglobinuria, as it has been variously styled. The subject is one of such great importance to physicians in latitudes where malaria abounds, that the newer works on practice of medicine will be carefully scanned for information on the subject.

This book, like the previous editions of the work, is the product of a master and an honored authority, and in its new form, with such of the latest ideas as the author can conscientiously endorse or present for consideration, continues to hold its place among the standard text-books on all matters included in it.

A MANUAL OF PRACTICAL THERAPEUTICS. By EDWARD JOHN WARING, M.D. Edited by DUDLEY W. BUXTON, M.D. Fourth Edition. P. Blakiston, Son & Co, Philadelphia, 1886.

This book, which was first issued for the use of medical officers of the British Army thirty-two years ago, has grown from the modest volume which was called a manual (a name which, though it has retained, is no longer applicable to it), into a work of standard authority. It is too well known now to require extended notice, and the profession always meets new editions of the author's work with welcome.

Long discussions of opposing views of the action of medicines are omitted, as well as a detailed account of their physiological effects, and these two points are well condensed into brief statements of accepted and well substantiated opinions on all articles of the materia medica which he presents. The introduction is a fair index to the author's style, being neither prolix nor so concise as to sacrifice clearness.

We note with pleasure the articles on arsenic and belladonna. A fair statement of the value of antipyrin is given, with its therapeutic indications.

The diastatic value of malt in salivary and pancreatic digestion, is well considered and forms a complete chapter or article when studied with the one on pepsin, which also includes pancreatin.

Opium and morphine, separately considered, are notable articles, and the study of quinine and salicylic acid is quite up to the best authorities and in a condensed and attractive form.

A copious index of diseases, with the drugs best recommended for their relief, and another one of drugs complete this volume.

A NOVEL OBSTETRICAL EXPEDIENT.—Dr. Shutsoff writes in *Russkaya Meditsina* of April, 1886, that he was called to see a woman who had been in labor five days. The pains had begun well, but had since ceased. Upon examination, he saw something black protruding from the anus, and a little pulling brought to light a sausage over seventeen inches long and fourteen inches in circumference. The pains now began again, and the woman was soon delivered of a dead child. Dr. Shutsoff found on inquiry that the sausage had been introduced on the recommendation of an old woman of the neighborhood in order to insure the birth of the child by the normal passage. This was probably the old wife's best attempt at supporting the perineum.—*Medical News*.

CURRENT LITERATURE.

TRIPLE CONTAGION OF TUBERCULOSIS—FROM MAN TO MAN, FROM MAN TO FOWLS, AND FROM FOWLS TO MAN.

Dr. de Lamailleur publishes, in the *Gazette Médicale de Paris*, the following interesting facts: The little village of C. is a most healthy spot, being about 2,000 feet above the level of the sea. Epidemics are there unknown, and the inhabitants of this village generally die of old age or pneumonia. In 1872 a young man who had contracted bronchitis whilst a prisoner in Germany during the war, settled down in this village. He married a strong, healthy girl; soon afterwards he began to spit blood, and died of consumption two months after the birth of a son, and within a year of his marriage. Soon after his death his wife, who had nursed him, had bronchitis, which became chronic, and in a little while tuberculosis of the lungs was manifested. The child had successive attacks of bronchitis, and rapidly developed consumption. Cavities formed in the woman's lungs, and she expectorated abundantly. A short time ago the physician attending her was called to a young woman in the same village who showed evident signs of pulmonary phthisis. The house was at some distance from that of the first female patient. The second patient was a woman, aged 29, and of a robust constitution. A careful examination revealed that she rarely went to the house of her neighbor, who had contracted consumption, and never ate or slept there, but that she had eaten the flesh of eleven fowls which had died at her invalid neighbor's during the space of four months. She had eaten them very underdone, believing that they were most nourishing when but slightly cooked. It was discovered that these fowls had swallowed some of the sputa expectorated by the first patient. The birds had been seen to collect round her whenever she coughed. On making a necropsy of one of the fowls which had just died, it was found that the intestines and liver were filled with tubercles. The fowl had become very emaciated, and could hardly move; the purulent liquid found in the tubercles contained in the liver was filled with bacilli tuber-

culosis. It was probable that the other birds had perished from the same cause. These fowls must, therefore, have been the means of conveying contagion to the second woman who had eaten them. In this case there is the triple contagion of tuberculosis. (1) From man to man. (2) From men to animals. (3) From animals to men. Contagion from man to man is already a scientific fact. Contagion from men to animals had been admitted by many writers, but others have stated that certain animals, amongst which are fowls, could not be inoculated. This case shows clearly that fowls are as liable to contract tuberculosis as other animals, such as cats and dogs. Contagion from animals to men is clearly demonstrated in this case. Up to this time the only known vehicle of contagion was cow's milk; now it is shown that the bacillus can also be carried through fowls. It is important, then, to pay great attention to the health of fowls, destined for food, and it would be worth while to find out how soon after the fowl has begun to suffer from tuberculosis it can infect those eating it, and also how much cooking will destroy the bacilli.—*British Medical Journal*.

SUBLIMATE INJECTIONS IN GONORRHOÆAL CYSTITIS.

The history of an obstinate case of gleet and cystitis is given in *El Dictamen* by Senor Garcia Andradas, which, after being treated unsuccessfully by means of injections of nitrate of silver, yielded very quickly to injections of corrosive sublimate. The patient, who was a river fisherman, contracted gonorrhœa, which was treated for a month with balsams and astringent injections. The discharge then became serous, and exquisitely painful vesical tenesmus supervened, the calls to urinate being so frequent as to give the man no rest. An attempt to pass an instrument occasioned the greatest agony when it came in contact with the prostatic portion of the urethra. The diagnosis made was that of acute prostatitis consequent on gonorrhœa, and so the local application of a sublimate solution appeared to be the most rational treatment, as it had in the author's hands proved very beneficial in cases of subacute cystitis due to the same cause; but it was thought well to try first

Guyon's treatment. With great difficulty, owing to the extreme sensitiveness of the urethra, an elastic catheter was passed to the prostatic portion, and 10 grammes of a 1 per cent. solution of nitrate of silver injected. A few minutes afterwards urine was passed with great pain, so a warm bath and an opiate were ordered, which gave only temporary relief, the opium having to be repeated at night. The next day the patient's condition was the same as it had been before the injection. Three or four days afterwards a similar injection was given, with no better result. Four days later, as there was no improvement, the use of sublimate injections was commenced. The catheter was passed as far as the prostate, and 45 grammes of a 2 per mille solution of sublimate in warm water were injected. This the patient was compelled to retain for three minutes; the subsequent micturition was very painful, but at night he was able to rest and retain his urine for three hours. The next day the urine was less turbid, and it was voided less frequently. His condition continued to improve for three days, when a second sublimate injection was given of double the quantity of solution. This occasioned some pain, but it quickly passed off, and the patient was able to rest. In four days' time he requested to be discharged, as his urine was clear and he had no pain on micturition. Thus, the author remarks, two injections sufficed to cure completely an affection usually most obnoxious to treatment of an ordinary kind. The superiority of sublimate injections has shown itself in several cases of a somewhat analogous character in which he has employed it. These he proposes to publish and discuss on some future occasion.—*Lancet*, August 21, 1886.

A SIMPLE METHOD OF REMOVING WENS.

In the *Northwestern Lancet*, July 15, 1886, Dr. Lauenstein's simple method of removing sebaceous cysts of the scalp is described. The skin over large wens of the scalp is often so thin that, in the commonly practiced method of extirpation with a free incision over the convexity of the tumor, the sac is often ruptured in spite of all care, and through collapse of the walls of the sac the separation of the skin is rendered difficult and protracted in a disagreeable manner.

This accident, unless it is a case of inflamed wen, may be avoided with certainty by a simple expedient, which has recommended itself to him on account of the rapidity of its execution, and which will be readily appreciated by those to whom it often happens to be pressed for time, or who, living in the country, are obliged to operate without skilled assistants. After shaving and cleaning the the neighborhood of the wen, he makes a radial cut, about one inch long, through the skin where it is separated from the capsule of the wen, for instance, on the back of the head at the lowest point of the base of the tumor; through this slit he introduces the slender handle of the scalpel used, or a similar instrument, between the skin and sac, more or less deeply, according to the size of the tumor. This is very easily accomplished, and then he makes several sweeping movements of the scalpel-handle to the right and left, thereby separating with ease the sac from the skin. The elasticity of the skin allows almost the whole circumference of the wen to be separated in this way in a few seconds. He then cuts, with one snip of the scissors, the skin over the crown of the tumor as far back as is necessary, and shells it out whole from its seat. There is often no bleeding, because of the division of the vessels of the sac by a blunt instrument. The rest of the treatment—sutures, drainage—is not affected by this procedure; nevertheless, he adds that any crushing or tearing of the edges of the wound is completely avoided.—*Medical and Surgical Reporter.*

BRIGHT'S DISEASE AND PSEUDO-BRIGHT'S.

Professor Mariano Semmola, of Naples, recently read before the Académie de Médecine of Paris a paper upon the pathology and treatment of Bright's disease which is likely to attract much attention.

The objects of the communication are announced categorically as follows :

1. The control of preceding researches by the author and an explanation of points that have been criticised.
2. The presentation of new experimental studies of Bright's disease.

3. Exhibition of the histological changes in the skin in Bright's disease.

4. The demonstration by clinical and experimental researches of the unicity and constant character of Bright's disease.

5. The indication of some errors previously held as regards treatment.

True Bright's disease, according to Semmola, is a well-defined affection, not of the kidney's primarily, but of nutrition, having the following characters :

1. A peculiar etiology, viz : the excessively slow action of humid cold upon the skin.

2. There is a progressive defect reaching to complete abolition of the functions of the skin, due to a progressive ischæmia, with atrophy of the sweat glands, of the Malpighian layer, with a connective-tissue proliferation of the derm.

3. There is a chemico-molecular alteration in the ingested albuminoids, an alteration characterized by a morbid diffusibility, and, in consequence, lack of power to be assimilated. They are, therefore, eliminated by the emunctories of the body, and, of course, mainly by the kidneys.

4. There is a progressive lessening in the combustion of albuminoids, and, in consequence, a lessened excretion daily of urea, and a lessened amount in the blood.

5. There is a subcutaneous infiltration of serum, beginning in the face, and not standing in any relation with hydræmia.

6. There is a very characteristic cachexia, which is not dependent on the loss of albumen, but on a profound disturbance in assimilation.

7. There is a *secondary* development, very slowly, of an inflammatory process in the two kidneys, producing in these organs the characteristic histological changes of diffuse nephritis, of which the typical form is constituted by the large white kidney.

Professor Semmola attacks the prevalent views, which uphold the clinical unity of Bright's disease, but admits an anatomical plurality so far as the kidneys are concerned.

There is only one true *Maladie de Bright* ; but there are sharply characterized forms of what are called "pseudo-Bright's disease." These are the forms produced by syphilis, alcohol, lead, gout, etc.

Professor Semmola thinks it is never difficult to distinguish be-

tween true and pseudo-Bright's, as, for example, by the absence of œdema until late; in nephritis of arterial origin; by the small amount of albumin lost through gouty kidneys, etc.

The author insists, then, that the true *Maladie de Bright* is a constant morbid type, marked by a definite and peculiar etiology, evolution, anatomy, nosography and treatment.

It is upon this point of treatment that Semmola lays much stress. The fundamental therapeutical indications are :

1. To give the patients a food which is the most assimilable possible.
2. To excite methodically the functions of the skin.
3. To favor by every means possible the assimilation and combustion of the albuminoids.

To carry out these indications Semmola recommends, first, an exclusively milk diet ; second, methodical and repeated dry friction of the skin, massage, warm douches and baths ; third, residence in a warm, dry and constant temperature ; fourth, the use of iodide and chloride of sodium, increasing it to the point of intolerance ; fifth, if, after two or three weeks, the albumin is still present, Semmola gives, in place of the iodide of sodium, the phosphate of soda, or small repeated doses of hypophosphite of soda or of iron, increasing the dosæ until three or four grammes are taken daily ; sixth, the use of inhalations of oxygen ; seventh, the abandonment entirely of astringents.—*Medical Record*.

PRELIMINARY EDUCATION OF MEDICAL STUDENTS.

In its educational number, dated September 11th, the *British Medical Journal* says :

“The theory of education has played a considerable part in all systems of philosophy since that of Plato, and of late has received even more general attention than hitherto ; but, though fashions have often changed, yet few stable conclusions have been reached, and there is much ground left as yet for eager debate. During the last few generations the rapid growth of knowledge has changed the conditions, and made such an encyclopædic education as Milton

sketched out more than two centuries ago quite too extensive to be possible now-a-days; nevertheless, the practice of laying some broad foundation of non-professional training to professional knowledge gains ground and wins approval on all sides. The subject-matter of the medical profession is growing more difficult, or rather we realize its many difficulties more fully, and feel more bound to attempt to train its younger members to grapple with them; the profession, moreover, stands, on the whole, better in credit with its bankers and with the world, and is inclined to think it worth while to use some of its opportunities wisely enough in obtaining a more thorough general education.

“The character of the general education to be sought after is not so easily determinable. After some warm controversy between the partizans of the old knowledge and the new as to the subjects to be taught, most of the best judges have arrived at a compromise, which one of them happily expresses by saying that science must come in, and language must not go out. More widely trained teachers, better schools, or ‘modern school’ departments are necessary to carry out such a compromise, and are being slowly, but steadily, manufactured to meet the demand. But the teacher’s profession, like most others that need skill and knowledge, is, as a profession, very conservative, and does not easily adapt itself to new molds; and in this matter the public has not clear enough perception of what it wants to be able to hurry on the supply. It is gradually becoming plain that we need not imagine all the advantages of a training in language to be bound up with Latin and Greek. The grammar of the classical languages may be the most reasonable and complete, but it is not the only grammar; and, at the outset of an education in language in England, it is much more rational to begin by teaching grammar (for, indeed, there is such a thing, and it is well worth study) to pupils who have probably gained—they know not how—a considerable volubility in English sentences. It probably does not alter their speech much, but it may serve to introduce them to system, and to show them that it is applicable to the most familiar things, namely, the words of daily life. So, too, any of the simpler branches of the sciences of observation of the outside world of nature may serve as the introduction to another field of system. Both paths lead on to abundant and profitable learning; the study of the English grammar leads

on to English literature, of which many of the treasures are now habitually passed by; the elementary science to the great generalizations of natural science which have had so strong an influence on our age.

"It is, fortunately, not so often the case now as it used to be that purely professional education is begun in boyhood. There are not so many country apprenticeships served, not so many entrances made at medical schools before the age of seventeen, but more cases where a non-professional education has been allowed to run on to twenty-one, or even later, and the paths of barrister, doctor and divine have lain together till they have come of age. Those who have intended throughout to seek medicine as a profession, and have had any capital to invest in themselves, have found a public school and university career a profitable as well as a pleasant investment.

"The eagerness with which university degrees are sought shows that the public like to see something that they may fancy is evidence of a university life. The elder English universities (and of them Cambridge most readily and freely) have opened their doors and arranged their teaching so as to make themselves comfortable homes of learning for medicine as well as the other arts and sciences. If a university is doing its duty, it should make itself a focus of all kinds of knowledge, and always be able to hold up before its pupils the dry flame of truth, the pursuit of knowledge for its own sake, and offer thus what may prove to be one of the very few chances in life of coming into contact with true student habits that have for some people a rare fascination.

"The education of the chief public schools, as it stands at the present, may perhaps be thought too apt to lead along the old-established paths of learning exclusively. That, however, is being quickly altered, even at the most conservative schools. A boy's classical education may fade easily, but it is no small addition to the knowledge of human nature and capacity to have gained some dim idea of the genius of Hannibal and the personality of Socrates, of the tale of Troy and the rhythm of Virgil; and what remains of any early education most deeply fixed is not mainly the facts and figures—whether they be of the natural sciences, or of grammar and language, or of the history of the world—but some notions, vague, perhaps, but strong, of the extent of knowledge in this direction or that, and some

generalizations that it may have cost the world centuries to supply, and along with these some love of knowledge, or at least some respect for it, based most probably on the recollection of the trouble that was necessary to acquire some small position of it.

“But we cannot be satisfied with only a strong “bookmindedness,” as Wordsworth called it; we want a practical education also, for we have to deal living human beings, and it is of the first importance that as many lessons as possible should be learned of the varieties of human nature; and of such lessons the life at a public school and a university, apart from the knowledge taught there, supplies a noteworthy abundance, and affords a large contribution to one form of the *tactus eruditus* which the world specially appreciates and admires, and calls, in short, tact.”—*New York Medical Journal*.

ERGOT AFTER LABOR.

“Ergot after Labor” was the title of a paper by Dr. John Goodman, of Louisville, Kentucky, which, in his absence, was read by the secretary at the annual meeting of the American Gynæcological Society, held at Baltimore in September. The administration of a full dose of ergot immediately after the completion of labor had become a general practice. It had been alleged that it promoted involution, prevented after-pains, and tended to prevent post-partum hæmorrhage. Some years ago the author administered a full dose of ergot after a perfectly normal labor. In fifteen minutes severe pain appeared and increased. The tenderness in the uterus continued for a week. There was no milk, and the patient, previously prolific, never again conceived. The trouble was attributed to inflammation of the muscular coat of the uterus, produced by the action of the ergot. In a second case ergot was given after a forceps delivery. On the seventh day the patient had a chill, followed by a temperature of 104°. The next day a clot was washed out of the uterus, and the temperature fell to 99°, well-marked septicæmia developed, and the patient died a week later. In this case the retention of the clot was attributed to the spasmodic contraction of the uterus preventing its escape. The author had seen other cases in which injurious effects were produced

by the administration of ergot. He maintained that ergot did not assist involution, which was a natural process, and required a certain length of time for its completion. That ergot was capable of arresting after-pains, could not be doubted, but it did so by exciting a mode of muscular action at variance with all physiological laws. After-pains were conservative, and it was better to wait until they became of abnormal severity before resorting to treatment. Ergot was capable of preventing hæmorrhage, but its use was attended with such dangers that it should be employed only under exceptional circumstances. It should be an inviolable rule not to give ergot at the close of the third stage of labor, unless hæmorrhage was imminent. It should then be used by hypodermic injection.

The President said that he was preparing a paper in which he protested against the routine practice of giving ergot after labor.

Dr. Goodell suggested that, since the author of the paper had stated that it was only since last May that he had given up the use of ergot he had not had sufficient time to form such positive opinions. In the first case related there must have been a fibroid tumor. The second case was a clear instance of septicæmia. He did not think that after-pains were conservative. As a rule, they were not seen in primiparæ. These pains were, in great measure, the result of weakness induced by civilization. Not every woman who had given birth to a child needed ergot, but there were those who did. In twenty-five hundred cases of labor, he had always given ergot after the completion of labor, and he had never seen any harm from its use. He did not believe that one dose of ergot had much effect in favoring involution. Involution was the result of fatty degeneration, and the greater the contraction the greater the interference with the circulation and the more rapidly should this change take place. He had used ergot to prevent hæmorrhage and to prevent the absorption of septic matter. Since the introduction of antiseptics, which should be used in every case of labor, whether in public or in private, the use of ergot to prevent septic infection was not so important, but it did not do the harm which had been mentioned.

Dr. Engelmann held in the main the views which the president had expressed.

Dr. Theophilus Parvin, of Philadelphia, thought that the effect of ergot varied with the dose. A small dose simply increased the normal uterine contractions. He must object to the assertion that ergot

should never be given before the completion of labor. Statistics showed that those who were most successful in the treatment of placenta prævia were the men who used ergot. Again, in multipara, with the os dilated, where a sudden rupture of the membranes took place with a cessation of labor, fifteen or twenty grains of ergot caused a rapid completion of the labor. After a protracted labor there was a weariness of the uterus, with a failure to enter upon the normal retraction, which prevented hæmorrhage and tended to promote involution. If we assisted nature in the expulsion of the placenta, why should we not assist her in securing normal retraction of the uterus after the completion of labor? In some experiments which he had made at the Philadelphia Hospital to determine the rapidity of involution of the uterus in women who had been given ergot and in those who had not, uterine involution had seemed to take place more rapidly in the former.

Dr. A. J. Skene, of Brooklyn, did not think that in the cases reported the ergot had had anything to do with the production of the effects. All rational men used ergot like any other remedy, when it was necessary or might become necessary. If there was any doubt whether or not it was needed, it was better to give the patient the benefit of the doubt.—*New York Medical Journal*.

A GREAT MEDICAL EDITOR DEAD.

The medical profession throughout the world has been accustomed for years to recognize the *Lancet* as one of the greatest medical journals. By years of toil, battling and endeavor, it succeeded, many years ago, in reaching that pinnacle of editorial fame to which the ambition of the elder Wakley always aspired, and there, through the ability and devotion of the son or the great founder, it has continued to perch. The elder Wakley lived to see his creature a creator of sentiment and a power in the medical world, and then in the fulness of time he laid down the pen, to be taken up and wielded with equal vigor by his son. For more than a quarter of a century Dr. James G. Wakley has been the controlling spirit of the great *Lancet*, and now he, too, has passed from among us. It may be remarked as a

somewhat curious coincidence that the great champion of the sword of America (Grant) and the great champion of the pen of England (Wakley), both were finally conquered by the same insidious and relentless foe, cancer of the tongue. Let us hope that Wakley has trained up some one to properly fill his vacant chair.—*Medical and Surgical Reporter*.

MEMORIZING DOSES.

Dr. G. A. Wiggins, of Philadelphia (*Medical World*, August, 1886), gives some general rules, with their exceptions, which are thoroughly reliable:

1. The dose of all infusions is 1 to 2 ounces, except infusion of digitalis, which is 2 to 4 drachms.

2. All poisonous tinctures 5 to 20 minims, except tincture of aconite, which is 1 to 5.

3. All wines from $\frac{1}{2}$ to 1 fluid drachm, except wine of opium, which is 5 to 15 minims.

4. All poisonous solid extracts you can give $\frac{1}{2}$ grain, except extract of calabar bean, which is 16 to $\frac{1}{4}$ grain.

5. All dilute acids from 5 to 20 minims, except dilute hydro-cyanic acid, which is 2 to 8 minims.

6. All aquæ from 1 to 2 ounces, except aqua lauro-cerasus and aqua ammonia, which are 10 to 30 minims.

7. Of all medicated syrups you can give 1 drachm.

8. All mixtures from $\frac{1}{2}$ to 1 fluid ounce.

9. All spirits from $\frac{1}{2}$ to 1 fluid drachm.

10. All essential oils from 1 to 5 minims.—*Medical and Surgical Reporter*.

DR. LAWSON TAIT.—The honorary degree of M.D. has been conferred upon Mr. Tait by the University of the City of New York. We wish for Dr. Tait the same marvellous success which has attended the labors of plain Mr. Tait. Dr. Tait's father was Friend Tait, a worthy quaker.—*Maryland Medical Journal*.

NOTES.

THE EDITOR OF THE "LANCET'S" CONFESSION OF FAITH.—Some time before his death the late Dr. James G. Wakley made a special request that the following confession of faith should be introduced into any notice of his life which might appear in the pages of the *Lancet*: "Feeling my deep responsibility to God for the position in which, in His providence, He has placed me, I desire to testify to the comfort derived during my sickness from a lively faith in our Lord Jesus Christ, and that I die in the sure hope of a glorious resurrection."—*Medical Record*.

THE AMOUNT OF GREEK NEEDED BY MEDICAL STUDENTS.—At the Berlin Congress of German Naturalists and Physicians, Professor Schwalbe, director of a Berlin *Real-Gymnasium*, in speaking of the knowledge of Greek necessary for the understanding of medical and scientific terms, said that he was preparing a Greek primer for equipping students with that knowledge. After a careful consideration of the subject, he had come to the conclusion that for the purpose in question it was sufficient to know about one hundred Greek nouns, twenty to twenty-five adjectives, fifteen to twenty pronouns, fifty verbs, the cardinal numbers, and a few adverbs and particles. All this could easily be acquired during the first semester at the gymnasium.—*Medical Record*.

ADVICE TO PHYSICIANS CONTEMPLATING POST-GRADUATE STUDY IN NEW YORK.—The New York correspondent of the *Mississippi Valley Medical Monthly* writes: "Permit me to offer a few words of advice to those of your readers who may contemplate a visit to New York. Briefly it is this: Make up your mind before you leave home what special branch or branches you wish to study up, and when you get here devote your entire time and energy to obtaining just what you want. This advice is based on my own and the experience of a great many of my fellow-students here. When I first came here I was led hither and thither by things that attracted me, to the detriment of the branches which I wished to master. No difficulty will be found in getting what is desired. The doctors of New York are eminently a teaching class, and if one cannot teach you what you want, he is sure to know of some good man who can."—*Medical Record*.

NEW OPERATION FOR PTERYGIUM.—On the 16th of June, with the assistance of Dr. Crofford, the eye was cocainized. A speculum was introduced to hold the lids apart; the entire breadth of the pterygium was grasped with fixation forceps, and with a delicate knife the growth was transfixed near the corneal margin, and the instrument which I now show you (somewhat resembling a strabismus hook) was introduced into the cut, and traction was made so as to pull or tear the growth from the corneal attachments. This pulls the pterygium bodily from its bed, and leaves the cornea perfectly clear, which is explained on anatomical grounds by microscopists who have learned that the under surface of the pterygium is covered by a layer of endothelium. The conjunctival portion of the pterygium was excised in the usual manner, and the edges of the wound were united with sutures.—*Dr. Minor in Mississippi Valley Medical Monthly.*

PEN PICTURE OF LAWSON TAIT.—Mr. Tait is a much younger man than I had expected to find him. He is just forty-one years of age; he is about five feet nine inches in height, and weighs, I should say, two hundred and twenty-five pounds. His legs are short, body quite long and large; hands short and fat, but how nimble and dextrous! His hair is dark brown, slightly sprinkled with gray, and he wears it quite long. He has a full face, with short side-whiskers. His voice is pleasant and manly, and his whole make-up impresses you as belonging to a person of immense force. His manners are pleasing, and to friends cordial. I should say he was a good lasting hater. He is a native of Edinburgh, and was a pupil and very intimate friend of the late Sir James Simpson, to whose pictures he bears a striking resemblance. He does most of his operations before breakfast, and seems to be in a big rush during all the day.—*Letter from W. O. Roberts in the American Practitioner and News.*

THE TREATMENT OF HYSTERICAL ATTACKS.—Dr. Albert Ruault gives a simple method which he has found very efficacious in controlling an hysterical fit. It consists in making firm and constant pressure over the supraorbital nerve at its point of emergence from the supraorbital foramen. The head is held securely between the palms of the hands, while pressure is made over the nerve on each

side with the thumbs. The writer says that the patients under this treatment first contract the facial muscles with an expression of pain, cry out, and then take several quick successive inspirations. The breath is held for a few seconds, and then, with a long expiration, the muscles relax and the attack is ended. The pressure of the thumb must now be relaxed, otherwise it may have the opposite effect and excite another convulsion. Pressure over any nerve-trunk at the point where it becomes superficial will have the same effect; but the supraorbital nerves are chosen because of their convenient situation.—*France Médicale*.

ANACHARIS ⁹ ALSINASTRUM.—Dr. Brandes has recently declared the valuable properties of the anacharis alsinastrum, a water-plant which has hitherto been considered as a nuisance. He says that in the district where he lives, and where malaria and diarrhœa yearly appeared in a sporadic or epidemic form, those diseases have gradually decreased since the anacharis alsinastrum began to infest the neighboring rivers and marshes, and for four years have totally disappeared. He proposes that the plant, which came originally from Canada, should be planted in marshy districts, with the view of checking malaria; and the experiment, in view of the evidence adduced in the article under notice, is certainly deserving of consideration.—*Medical News*.

[Has not reached this neighborhood, but *A. Canadensis* is found in Cherokee county, Valley river.—T. F. W.]

DEATH OF JAMES G. WAKLEY, M.D.—Dr. James G. Wakley, editor of the *Lancet*, London, England, died August 30, of cancer of the tongue and fauces, at Heathlands Park, near Chertsey, England. He was the youngest son of the late Thomas Wakley, founder of the *Lancet*, member of Parliament for Finsbury, and coroner for Middlesex, and is survived by his brothers, Thomas H. and H. Membury Wakley, having been associated with the former as half proprietor of the *Lancet*. He became a member of the Royal College of Surgeons of England in 1849, and was graduated Doctor of Medicine at King's College, Aberdeen, in 1852. At his father's death, in 1862, he became editor of the *Lancet*, the duties of which position he discharged for nearly twenty-five years, continuing, in spite of much recent suffering, active in his work up to last Easter. Dr. Wakley proved himself a worthy successor in

every way to his distinguished father. Through his painstaking labor, his journalistic skill and his conscientious devotion to the best ideals in medical journalism, he has kept the *Lancet* against all rivals in the high position won for it by its founder.—*Medical Record*.

BISMUTH SALICYLATE.—Solger recommends salicylate of bismuth very highly in chronic catarrh of the bowels, also in the diarrhœa in the last stages of tuberculosis. In reflex neurosis, due to chronic intestinal affections impotency and epileptic imbecility, due to the same cause, Solger obtained excellent results from its use. It is best administered in cachets, and is given in doses of 0.6 grammes, repeated every three hours.—*American Journal of Pharmacy*.

TWO NEW REACTIONS FOR MORPHINE.—1. If 1 milligram of powdered morphine is intimately mixed with 8 drops of concentrated sulphuric acid and a small particle of arseniate of potassium, and the whole is heated in a capsule (agitating constantly) until acid vapors are evolved a beautiful blue-violet color is produced; by continuing the heat the color changes to a dark-brown red. If water is cautiously added, a reddish color, turning green when more water is added, results. If the liquid is shaken with chloroform, a beautiful violet color is produced, if shaken with ether, a violet-red color, the bottom layer turning brown. 2. If morphine is rubbed up with about 8 drops of concentrated sulphuric acid and a drop of a solution of chlorate of potassium 1.50, a persistent grass-green coloration, having a pale rose-red margin, is produced.—*American Journal of Pharmacy*.

ON CONTUSION AS A DETERMINING CAUSE OF NEOPLASMS.—We all know how much the question of the rôle of contusion has been discussed in the development of cancer and tumors in general. For my part, I have always admitted this cause, not only for the malignant new growths, but also for the most benign, such as cysts, lipoma, etc. One of my internes, M. Le Clerc, has, under my directions, accumulated a quantity of material, and has prepared a thesis giving the actual state of our knowledge upon this subject. The following are the conclusions reached in his thesis. 1st. Contusion has an undeniable rôle in the etiology of neoplasms. 2d. It acts by exaggerating the reparative process going on in the centre

of the tissues, and by creating in the wounded part a *locus minoris resistantiæ*. 3d. It is, however, only a localized cause, and cannot produce by itself a neoplasm; to do so it needs a diathesis that we will call neoplastic, which is secondary, and depends upon arthritism.—*Prof. Verneuil in Medical Times*.

DR. BROADBEND, of London, in a recent address before the British Medical Association, warns against the prolonged use of colchicum in gouty subjects, on account, chiefly, of the increased arterial tension it induces. After the drug has been given for any prolonged period, it should be suspended, and the system cleared out by the administration of alkalies.—*American Druggist*.

THE effects following occasionally the instillation of cocaine into the eye, leaving opaque spots upon the cornea, seems in a number of cases to be probably due to the use of corrosive sublimate as an antiseptic at the same time that the cocaine is exhibited for its anæsthetic and midratic effect. "At least," says the *British Medical Journal*, "the most of the cases reported in which these opacities have been noticed come from institutions in which the use of corrosive sublimate is routine practice. It is yet a matter of conjecture to what this effect is due, but it is probable that the absorbing powers of the cornea are increased by the cocaine, and the interstitial changes effected by this drug alone must be carefully studied in order to separate these effects from those of its use combined with other medicines.

THE AMERICAN LANCET thinks physicians would very often save the health and obtain the gratitude of young people about to marry by advising them against the wedding tours that are now so fashionable. "Marriage is one of the epochs of life. It is peculiarly related to the physical well-being of both parties and to the unborn." Take the young wife who has just finished a period of exhausting excitement in arranging for the event, and to this is added the excitement incident to her entrance upon entirely new physical relations. The hurry, discomfort and weariness of railroad travel, and the strain upon the nervous system following visits to new scenes and exposures to extremes of heat and cold, all make it desirable that this portion of the new life of the married couple should be spent in repose and seclusion. These ideas will commend themselves by the worth they contain.

THE smell of rotting Irish potatoes is due to the action of *Bacterium termo*, although two other fungi aid in the destruction.—*E. W. Claypole, in Bulletin Torrey Bot. Clube.*

HYDROCHLORATE OF CAFFEINE has been observed by Dr. Terrier to possess an anæsthetic action almost identical with that of cocaine.—*Journal de Mèd. de Paris.*

SALICYLATE OF COCAINE in doses of 6 grains, given hypodermatically at the commencement of an attack of asthma nervosum has succeeded in cutting it short. Subsequent and smaller ones occasionally have been necessary to produce the desired relief.

DR. CRESSWELL HEWETT, of Lincoln's-iron-Fields, claims to have discovered a method of making quinine synthetically. A sample of his manufactured article has been submitted to Messrs. Howard & Sons, quinine manufacturers (London correspondence *American Practitioner and News*, Louisville, Ky.), and they expressed surprise at the result of their analysis, the sample being equal to the best in the market.

BATHS are divided into—

1. The cold bath, from 33° to 60° Fahrenheit.
2. The cool bath, “ 60° “ 75° “
3. The tem. bath, “ 75° “ 85° “
4. The tep. bath, “ 85° “ 92° “
5. The w'm bath, “ 92° “ 98° “
6. The hot bath, “ 98° “ 112° “

— *Waring's Therapeutics.*

EXCISION OF A CEREBRAL TUMOR.—The *British Medical Journal*, October 2, 1886, report the successful removal of a cerebral tumor from the brain of a patient who had been hemiplegic for a month, and had passed into a semi-comatose condition. The operation was by Mr. Victor Horsley, who trephined over the region of the tumor and removed it. It was 3 inches long, 2½ inches broad, and 2 inches deep, weighing 4½ ounces. The patient made a recovery with some power over his leg four days after the operation. This is the fourth case in which Mr. Horsley has operated successfully on the motor area of the cortex of the brain.

HABERKON, in *L' Union Medicale*, September 2, 1886, records a series of fifty cases of erysipelas treated with benzoate of soda administered internally. The aggregate daily dose attained was four or five drachms, and admirable results followed its use. The drug was given in mucilage or an effervescent water, and under its influence the fibrile temperature is reduced to the normal in twenty-four hours. At the same time there is a diminution of all other symptoms. No external applications were used, and in only two cases was an augmentation of the dose necessary.—*Medical News*.

THE CALIFORNIA STATE BOARD OF EXAMINERS, at two recent sessions, granted certificates to twenty-five applicants to practice medicine and surgery in that State. The time of graduation of the applicants extended from 1886 as far back as 1850. A practitioner of San Francisco, whose certificate to practice medicine was revoked by the Board last year, was recently arrested for practicing medicine without a license. When his case was called in the police court he pleaded guilty as charged, and paid a nominal fine of fifty dollars. He has now withdrawn his unprofessional advertisements, and states that he will hereafter comply with the requirements of the law.

SYME'S OPERATION PREFERRED OVER CHOPART'S OR PIRAGOFF'S.—In field surgery, during the late war, Chopart's and Piragoff's amputation of the foot were everywhere practiced. Candidates for surgeon's commissions were expected to be familiar with them, and Syme's amputation was little dwelt upon. We notice recently in the *Medical Chronicle*, in an article from G. A. Wright, F.R.C.S. (September, 1886), that he says: "In rare cases Chopart's or Piragoff's operations are performed, but the general opinion of surgeons is against these, and recently even Piragoff himself declared in favor of Syme's plan as contrasted with his own, while probably Chopart's operation is not performed half a dozen times in a year for tuberculous disease of the tarsus." Syme's operation has supplanted the others in the surgery of this section.

FOR the information of members of the Society who have received from Dr. Bahnson, their President, his admirable and timely appeal for help for the medical profession in Charleston, and to the readers of the JOURNAL generally we wish to add to what

we have published in this matter, that it is for the rebuilding of the Medical College that funds are necessary, and donations to that end will be bestowed upon a most deserving institution, and under the control of medical gentlemen of well-known ability. We hope the appeal made in the statement of the Dean of the College, that it will require from \$8,000 to \$10,000 to repair the building and dissecting room, will meet with a hearty response from the profession in this State and throughout the United States. Contributions can be sent direct to Dr. Middleton Michel, in Charleston, or if physicians or others in North Carolina prefer to send in their donations through the medium of the officers of the State Society, the channel which Dr. Bahnson's appeal opens for them will be available, that is, to send in the funds through the Society's Treasurer, Dr. R. L. Payne, Jr., Lexington, N. C.

PHYSIOLOGY OF SLEEP.—The familiarity with the wonderful phenomenon of sleep has blunted our powers of observation into this important and interesting condition, and one of which so little is thoroughly understood as to the cause or the order of events which determine it. The *British Medical Journal* says: "Since attention was first turned to the investigation of the physiology of sleep numerous contending, and often absurd, theories have been formulated, with a view of accounting for its rhythmical occurrence; the unconsciousness, in varying degrees, which accompanies it, and its bearing on the economy. The very nature of the subject, however, seems to have predisposed those who devoted themselves to its study to leave the arid path of scientific research and deduction in favor of the more flowery and popular method of dishing up recitals of the weird and the extraordinary, as exemplified in those aberrations or varieties of sleep known as somnambulism, hypnotism, etc.; and the result has been the publication of numerous treatises, containing much that is both curious and interesting, but which, from a physiological or a pathological point of view, are not of much value. The perusal of a really scientific work on the subject, however, only proves once more the truth of the adage that truth is stranger than fiction. To the methodical and careful observer, the proper means of research yield results which are incomparably more curious, and, at the same time, instructive, than the pseudo-facts with which some writers fill their books. Each

successive gradation in sleep is marked by the inclusion of a nervous system which is for the time being shut off, so to speak, from participating in the general life-function of the individual until, when the maximum intensity is attained, nothing is left but the purely animal—one might almost say the vegetative—life. Sleep of this degree of intensity, although a perfectly normal process, is not, in health, of long duration. After the lapse of a variable space of time, the systems one by one resume their function, until finally the sum of perceptions brings about the condition of awakening. As a natural consequence of these variations in perceptive powers, the character of the sleep is altered, according to the period. From the deep unconsciousness of complete repose, when every sense is in abeyance and the will rendered nugatory, the cerebrum is gradually aroused, first to the dim appreciation of the influence of external agencies, followed in due course by a return of perceptive power in the sensorium, and the cessation of sleep. The brain shares in the need, which is everywhere apparent, of periods of rest. The products of cerebral activity accumulate more rapidly than they are eliminated, and a period therefore arrives when the tissues are no longer able to do their work. The result is an invincible feeling of indisposition to exertion, physical or mental. The temporary and involuntary cessation of activity is at once followed by a diminution of the blood-supply; the anæmia so induced being, therefore, a consequence, and not a cause, of the state of repose. The various parts of the nervous system are not all involved simultaneously or to the same extent. The centres governing voluntary movement are the first to be affected, as seen in the nodding of the head and the closure of the eyelids; and the body, if not prevented, tends to assume the position of repose, determined by the laws of gravity. The special senses soon follow; but here, again, they are not abrogated *en masse*. Sight is the first to go, the stimulus no longer reaching that portion of the cerebrum where it can give rise to a definite sensation, even where the closure of the lids has not shut off external stimuli altogether. Hearing and smell are remarkably persistent, and, except in the deepest sleep, may be said to be only dulled, and not extinguished. Everyone is familiar with the ease with which sleep is put an end to by unaccustomed noise, even of slight intensity, or, better still, by the cessation of any monotonous sound, as, for instance, the awakening of travellers by rail or steam-

boat on any stoppage of the train or machinery. Instances are on record, too, where the inhabitants of a house have been roused simply by the smell of the tobacco indulged in by inexperienced or incautious burglars. The persistent sensibility of these senses may to some extent be accounted for by the fact that they are not shut off from communication with the outside world, as are, for example, the eyes."

WE have received from Messrs. Reed & Carnrick, of New York, a convenient and well arranged series of "Diet Tables," for the use of the nurses in sick rooms. A leaf is allotted to the dietary of each disease, which can be detached and left for those who have care of the patients. To the list of food advised there is also appended, what is probably more necessary, those articles which must not be given. The firm issuing this very handsome and convenient little book of tables do not attempt to do more than suggest, on good authority, the dishes they present. But it will be useful to the physician, and relieve him very often of the necessity of making up a list for the attendant's direction.


SUBCUTANEOUS INJECTION OF SALT SOLUTION.—D. Tuttle, in the *Boston Medical and Surgical Journal*, describes, as follows, the subcutaneous injection of 50 cem. of a salt solution into the body of a boy seven years old, by Prof. Monti, in Vienna, and believing it may be of interest to your readers, and perhaps at some time useful, I send you this brief description of his method. The requisites are, a piece of rubber-tubing about six feet long, a large hypodermic needle and a graduated beaker containing a solution of salt. The salt solution is heated to 100° F., and then placed about four feet above the patient on a stool that rests on the top of a table. The hypodermic needle is attached to one end of the rubber-tubing. The tubing is filled with water, and one end is inserted into the salt solution, then the needle end of the tube is lowered and the contents are allowed to run off until the stream becomes warm from the salt solution in the beaker. The needle is now inserted into the subcutaneous tissue while the stream is flowing. At this moment an assistant reads the level of the fluid in the beaker. This done, one can tell exactly, by means of the scale on the beaker, how much of the solution has been injected. The tissue is distended by the fluid forming a tumor which disappears in the course of an hour or

two. In the case I saw the injection was made an inch and a half below the naval, and a half inch to the right of the median line. The swelling was an inch and a half in diameter and about half an inch in height. The whole time occupied in giving the injection and making the necessary preparations did not exceed twenty minutes. The method has been employed in the collapse of cholera infantum, and may further be found useful in some of those cases where intravenous injection has formerly been resorted to.—*Boston Medical and Surgical Journal*.

HAVING made arrangements with the *Therapeutic Gazette* and *American Medical Digest* by which we can offer those valuable journals in combination with the NORTH CAROLINA MEDICAL JOURNAL at reduced rates, we make the following offer to new subscribers and to those who wish to renew their subscriptions:

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DEATH FROM THE STING OF A WASP.—At an inquest held not long ago at Bath, Eng., respecting the death of an old lady, it was found that she had died from a wasp sting.—*Medical Record*.

A HANDY EMMENAGOGUE.—The common garden beet is said to act as an efficient emmenagogue if taken in sufficient quantity. An active principle is derived from it called betin, of which the dose ranges from two to four grains.—*Medical Record*.

[The demand for this class of remedies must be seriously increasing, and the renewed supplies seems to equal the needs of the seekers for relief.]

BOOKS AND PAMPHLETS RECEIVED.

Social Ethics.

Meconeuropathia. By C. H. Hughes, M.D.

Report of the Quarantine System of the St. Lawrence.

The Artificial Feeding of Infants. By John M. Keating, M.D.

Trigger Finger (*doigt à ressort*). By George W. Jacoby, M.D.

The Pamlico Section of North Carolina. By Jonathan Havens, New Bern.

Intestinal Castes; with the Report of a Case. By William A. Edwards, M. D.

An Eulogy on the Life and Character of Dr. Ashbel Smith. By Dr. A. G. Clopton.

Intubation of the Larynx for Diphtheritic Croup. By E. Fletcher Ingals, A.M., M.D.

The Relation of the State and the Medical Profession. By Chas. J. Lundy, A.M., M.D.

Enucleation with Transplantation and Reimplantation of Eyes. By Charles H. May, M.D,

Annual Report of the Librarian of Congress, Exhibiting the Progress of the Library during the Calendar Year 1885.

Report of the Delegates from the Philadelphia County Medical Society to the Thirty-seventh Annual Meeting of the American Medical Association.

Erysipelas and Other Septic and Infectious Diseases Incident to Injuries and Surgical Operations Prevented by a Method of Atmospheric Purification. By David Prince, M.D.

Deductions from Ninety-one (91) Cases of Rheumatism, being a Consideration of the Report of the Committee on the Collective Investigation of Disease of the Medical Society of the State of Pennsylvania. By William A. Edwards, M.D.

Care of the Eyes and Ears. By Richard H. Lewis, M.D.

Proceedings of Pharmaceutical Association, North Carolina, 1886.

Two Rare Cases of Abdominal Injury. By J. A. Stucky, M.D.

Method of Managing Typhoid Fever. By F. Peyre Porcher, M.D.

Surgical Notes from the Case-Book of a General Practitioner. By William C. Wile, M.D.

Operation on the Drum-Head for Impaired Hearing; with Fourteen Cases. By Seth B. Bishop, M.D.

Galvano-Cautery in the Diseases of the Prostate, Bladder and Urethra. By Robert Newman, M.D.

Amputation at the Hip-Joint for Morbus Coxæ; with a Case and a Specimen. By Donald Maclean, M.D.

Some Reflections on Professional Ethics, Medical Legislation and Jury Trials of the Insane. By D. R. Wallace, M.D.

Radical Cure of Reducible Hernia. By Middleton Michel, M.D., Charleston. Extract from Reference Hand-Book of the Medical Sciences.

The Chartered Rights of the Medical and Chirurgical Faculty of Maayland to Exact Licenses to Practice in the State. By John R. Quinan, M.D.

READING NOTICES.

LACTATED FOOD IN DIABETES MELLITUS.—The following case will well illustrate the usefulness of the Food when applied to the treatment of this disease in its most aggravated form. A man 22 years of age had been suffering from headache, prostration, intense thirst and a voracious appetite for several months. Upon examination of him, in March last, he had all the above symptoms; had become too feeble to walk, and was practically confined to the bed. He was voiding 12 quarts of urine in 24 hours, which, upon analysis, showed a specific gravity of 1036—4 grains of sugar to the

ounce. His thirst was intolerable, his appetite unnatural, craving starchy and saccharine food; was unable to sleep, and obstinate constipation existed for several weeks. He was put upon Lactated Food and skimmed milk, allowed to drink all he wanted of these, but denied water or any other article of food. In 48 hours the quantity of water voided was reduced to 3 quarts. In one week his food and drink consisted wholly of Lactated Food, and the general improvement in his symptoms was most marked. He continued on this diet for two months, and, so far as I could determine, all the prominent symptoms of Diabetes had disappeared. He was voiding but 1 quart of urine in 24 hours, sp. gr. 1016, bowels regular, could sleep without anodynes, had gained in strength, and was walking about. At this time, six months after adopting this plan of treatment, he is at work, has no apparent symptoms of the disease, and is allowed to take a mixed diet, simply avoiding starches and sugars.

PARVULES.—This is a coined word, meaning small doses in globular form for frequent repetition, usually divided into periods of one hour each. It is claimed in its behalf that it is the only perfect dosimetric system of administering medicines. That is to say, the quantity and frequency also must determine the therapeutic effect. It enables the physician to regulate with certainty the action of the drug, the rule being to give one Parvule every hour or two every two hours. Any age can be suited, because reference to the list of this class of remedies prepared by Wm. R. Warner & Co., of Philadelphia, will show that in nearly all cases 24 Parvules a day, or the average of one per hour, would be full dosage. For instance, 1-50 gr. Morphia in each would be half a grain a day; 1-20 gr. Podophyllin would be one grain and a fifth a day. In case of Calomel it is a recognized fact that small doses produce wonderful effects. One or two Calomel Parvules taken every hour for six doses have marvelous effect. The Parvules of Aloin in certain cases, periodically taken, produce great effect and comfort. A logical explanation of the exact action of minimum doses is an impossibility in the present state of physiological investigation. Bartholow says that the therapeutical action is the physiological antagonist of the diseased action. The only certain principle of action, however, is found in actual experience. Drs. Peters, of Paris, Ringer, Bartholow, Dessau and others, equally well-known in the literary arena, have cited numerous cases of almost every variety of disease wherein they brought about a desired result by the adoption of minimum doses, when all other plans of treatment had failed. The Parvules are elegant in form and certain in action. Their mode of preparation, together with their action upon secreting surfaces, prevent cumulative effects. The dose and effect can be regulated with the utmost precision, while their simulative size, with an absence of taste, render them of peculiar service.

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THOMAS F. WOOD, M. D.,
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ORIGINAL COMMUNICATIONS.

THE MALARIAL DISEASES OF EASTERN NORTH CAROLINA—STUDIED WITH REFERENCE TO THE GERM THEORY.

By S. S. SATCHWELL, M.D.

(Read before the North Carolina Medical Society, at New Bern, May 21, 1886.)

Mr. President and Gentlemen of the North Carolina State Medical Society :

At an annual meeting at Raleigh, in May, 1884, I was appointed to report, at the succeeding meeting at Durham, upon "Advancement in the Science and Practice of Medicine." Prevented by unavoidable engagements from so doing, I now beg leave, respectfully, to submit this paper as a substitute, duly appreciating the compliment of said appointment. It contains some reflections upon the germ theory and malaria, together with a notice of some of the prevailing inflammations and fevers of our eastern counties. As a laborious country practitioner in Eastern North Carolina for the last thirty years, I trust

this record of a portion of my observation and experience will not be wholly devoid of interest. We all know something of the necessity imposed upon the country practitioner of thinking for himself and of cultivating habits of self-reliance. This very necessity trains him to observe and investigate for himself, and to be careful and discriminating in accepting views, conclusions or dogmas of others without subjecting them to the test of rigid examination, sound medical reasoning and ample experience. So wonderful is the onward march of medical progress, as relating to the etiology, nature, pathology and therapeutics of disease, that, unless we are acquainted with sifted facts and actual knowledge that underlie established principles of our art and science, we are apt to become mere routinists, disqualified for deciding upon new theories and remedies as they continually come forward, and are easily made victims of those medical errors and delusions that are ever assailing the bulwarks of the profession. So great are the demands upon us all in these fundamental relations that scarcely any publication or treatise on a medical subject is now regarded as entitled to consideration unless it embraces the cause and nature of disease, as well as the means of its prevention, removal and cure. Especially is this true as bearing upon whatever relates to the origin and nature of disease. Laymen, as well as scientists and busy practitioners, are now interested as never before by new enquiries and developments upon this subject that have come to the surface in connection with the germ theory of disease. During the last ten or fifteen years no question in medicine has been so much agitated or occupied so much thought in our profession as this fascinating subject known as the germ theory. So that it would be unpardonable in me, in discussing some of the prevailing fevers and inflammatory diseases of the middle and eastern counties, to omit a reference to the family of micro-organisms, as well as to malaria, as factors of disease. It is encouraging that advances in the last few years in the literature of micro-organisms and bacterial pathology have not only shown, as were previously unknown, and even unsuspected, that these bodies are infinitely small in size, but that they bear important relations to our own organisms and to the lower animals in health and disease. It is not surprising, therefore, that the subject presses upon medical attention to an absorbing degree. Our last "Transactions" contain a well-prepared review of the relations of micro-organisms to disease, from the pen of our talented young member, Hubert Haywood, M D., of

Raleigh. In common with all who listened to its reading, I heard him with much interest. Like so many others, who have seized with avidity upon the disclosures of the microscope in these assumed relations of micro-organisms, the doctor holds that the human organism is invaded by microscopic organisms or germs, and that disease is a struggle between the organism and the parasites invading it. This idea (using his own language) "discards the old idea of impurities of the blood, chemical dyscrasia, a genius epidemicus, and the omnipotent bugbear cold." Dr. Haywood argues most ingeniously, as do others, in contending that the germ theory rests upon a solid foundation. He offers as evidence that "measures and remedies that have the most beneficial effects in the prevention, treatment and cure of the different infectious diseases have been proven to be antiseptic and germicidal in their properties." He says "there is the direct proof of the certainty of the germ theory in the artificial cultivation of micro-organisms associated with certain diseases and obtained from the subjects of such diseases, in sterilized, nutrient fluids, and inoculations with these pure cultures, several generations from the original source, thus reproducing the original disease, with all of its characteristic features." Distinguished authors say: "These parasitic forms of life are of two, or, as some would opine, of three kinds. Certain of them are of a distinct animal character, others are distinctly vegetable, while others, it is assumed, lie between the vegetable and animal kingdoms." It is claimed for human parasites that they are of three classes: 1st. Entozoa. 2d. Ectozoa. 3d. Entophyta and Epiphyta. The first two classes are said to be animal in character, embracing a large number of parasites, known and recognized. The last are regarded as vegetable, the nature of which are of more recent investigation and discovery, and are now claimed as the cause of the most formidable diseases that scourge mankind. They are said to be of the nature of fungi, one of the very simplest forms of life, and found in the blood, secretions and tissues of the human system in many diseases. As we all know, bacteria are organisms, or parasites, to which are attached primary meaning and great importance by those who claim them as causes of disease. Bacilli, as is well-known, are rod-like bacteria and multiply by fission as well as by spores. It seems that prolonged boiling does not lessen their activity, neither does immersion in alcohol for months, and time seems powerless to weaken them. They are capable of growth and reproduction. They are

regarded as the lowest form of bioplasm in nature, and, according to Koch, they do not originate in healthy animal tissue. They exist upon the skin and surface of mucous membranes, in the mouth and in the follicles of glands. Morbid alterations in digestions are claimed to be followed by the multiplication of bacteria in all parts of the alimentary canal. The germs are claimed to be found in healthy blood, but remain dormant until some change adverse to healthy action takes place, when they grow and multiply with much rapidity. It is difficult to find a spot destitute of bacteria germs. They exist in the air we breathe, in the water we drink, upon the soil, on high mountains and in plains and valleys, riding on trees, dust, insects and upon the rays of the sun. It is for morbid structures they have the greatest appetite. They prey with great avidity upon dead animal tissues—are found in the secretions of cholera and fever patients during life, and people the body in numberless swarms a few hours after death. But Koch, Pasteur and others affirm that they have not detected bacteria in healthy animal tissue. In health we may breathe, eat and drink bacteria with impunity, but as soon as disease sets in the diseased tissue or organ swarms with them. It is held that putrefaction is dependent upon the presence of bacteria and that sepsis is due to their action. Therefore septic infection from a wound means the absorption of bacteria. It is contended that, while septic infection is only another name for the presence of bacteria, and, while the presence of bacteria in the wound is unnecessary, yet that these liquids are putrid because they embrace the products of bacterial life. Amid the admitted doubt and speculation hitherto attendant, to no little extent, upon the etiology of disease, conjoined with the seductive attractions of the germ theory, and the glittering costume in which novelty is generally robed, a great bacterial wave has been sweeping over the medical world for a number of years.

The enthusiasm exhibited by the brilliant workers in the untiring field of germs, micro-organisms and the entire family of microbes is calculated to convey the impression that the subject is a new one, confined to the last ten or fifteen years. Not so, however. As early as the middle of the last century it occupied the attention of the profession. Then it was that authors pointed to "animalcules" as the cause of contagion. Thus early did medical men hold that an extensive list of diseases were owing to the effects of parasitic organisms. Itch, dysentery, measles, syphilis, leprosy, small-pox and other diseases were

claimed to be due to this cause. Tubercles were held to be owing to acare in the lungs. Cholera was thought to be caused by matters originating from lower organisms. These early germ theories were abundant because of the want of relationship between the cause and effect. *Their* methods withheld the action of the cause. *Ours* consists in applying it to lower animals by inoculation. It seems that micro-organisms, called *infusoria* in earlier times, were first perceived by Leuwenhoek (1675). Dr. William Budd, of Bristol, England, was about the first man of recent times who claimed, in 1849, that low organisms invaded the body and caused infectious diseases. Since then, as we all know, Koch, Klein, Pasteur and others have made extensive researches in the line of micro-organisms; Pasteur in chicken-cholera, hydrophobia, etc.; Koch in septicaemia, tuberculosis, etc., and Klein, Koch and others in the minobes of cholera. Kindred researches are now going on with great industry in respect to malarial and typhoid fevers, pneumonia, yellow fever and other diseases.

It is claimed, with plausibility and persistent tenacity, that micro-organisms constitute efficient cause of disease for the following reasons among others:

1st. That there are constantly the same bacteria in the tissues or discharges, and in numbers sufficient to cause the symptoms.

2d. That the organisms, as likewise morbid matter taken from diseased animals, produce the same disease in other animals.

3d. That pure cultures, distinct from other organisms, and free from original morbid matter, and carried through several generations, as called, cause the same disease in other animals.

Now, existing facts and medical reasoning do not clearly establish these propositions. In regard to the first, it is true that germists admit the presence of an organism as evidence of its causative efficacy. But medical reasoning here is at fault because of a failure to draw the necessary distinction between cause and concomitance or coincidence. Who knows whether the organism is a cause, or a concomitant, or a coincident of disease? Besides, different germists, while contending that morbid conditions imply the presence of an organism as cause of disease, do not, in all cases, agree as to the nature and character of the organism. Here we have different causes set up in the same morbid condition and in the same body, as producing the same disease. In nearly every disease claimed to be of parasitic origin more than one organism is claimed by different discoverers to be its cause.

In relation to the second proposition, the method of experiment referred to is not conclusive evidence. It only shows, in all fairness, that disease may be communicated by infection. *But whether the micro-organism itself or diseased tissue is the efficient instrument or agent, is not shown.*

The third proposition, it is respectfully submitted, is also defective in proof. A pure culture means freedom not alone from other organisms, but freedom from morbid matter or condition. It is called pure when only one species of micro-organism is present, and this means that nothing else is present but that organism. For purposes of inoculation the organism and some of the culture medium must be used. Generally the latter is greater in amount than the former. Of course, before using the material all morbid matter must be removed from it. The process or mechanism by which this removal is effected opens, or presents, three different suppositions for its explanation or solution. It must be done by desiccation, or putrefaction, or dilution. If done by desiccation, the process can hardly be regarded as efficient, for the reason that the desiccated morbid material would be likely to absorb moisture from the tissues of the inoculated animal, and thus become diffused throughout the blood and serum. The process of putrefaction presupposes the presence of putrefactive organisms. True, these organisms do not continue to grow, but their spores, only destroyed by boiling, will adhere and be transferred from culture to culture, and hence remain with the matter used for inoculating purposes. These spores, it is claimed, easily develop in the inoculated animal and confirm the result, as it is contended examples have shown. Those who deny the conclusions of Pasteur and others assert that if the process is by dilution, dissipating the original morbid material, in fluid cultures it becomes enormous. It is argued, they say, by Pasteur, that if a single drop is used to inoculate twelve successive cultures, the dilution of the original drop of blood is the same as if the drop were placed in a bulk of water equivalent to the size of the entire earth. If the impression sought to be made by this statement is well-grounded, this extreme and extraordinary dilution would, as a matter of course, show the absence, practically, of morbid matter. But the assertion is boldly challenged by disbelievers, who contend that if a drop of blood should be placed in such a bulk of water the micro-organism, even, would be lost, as well as the organized elements of the blood. The sophistry of the proposition is seen in the exclusion of the effects which

the culture causes. Are we to disregard influences which morbid tissue may exert on the culture medium? This consideration is ignored in the self-sufficiency of the explanation that the material is an infinitesimal portion of a chemical virus. A pure culture is entirely unnecessary under any assumption that morbid matter has no influence in the transmission of disease. It has not yet been shown by experimental investigation what the influence of morbid tissue is or how it operates. Not until it has been proved what the powers of morbid material are, apart from organisms, can it be demonstrated that lower organisms, and lower organisms alone, are the efficient cause of disease.

Hoffman has recently written a work to establish a fact, heretofore denied, that normal human blood contains an abundant quantity of micro-organisms which, under appropriate conditions, may assume pathogenic properties. At a recent meeting of the Paris Academy of Medicine that noted medical gentleman, Professor Le Fort, made a bold and vigorous assault upon the microbe theory. Addressing himself to its special advocates, he said: "By denying the spontaneous germination of microbes *in* the system, you necessitate their existence *outside* of it, and yet you cannot detect one there. The most virulent epidemic of erysipelas, or gangrene, or hospital fever may rage in a hospital ward, but still human ingenuity is powerless to find in its atmosphere a single morbid germ, if there really existed anything in the *entourage* of the stricken patients—and germs would be there if they *enter from without*—they would necessarily be discoverable. It follows, therefore, that the negative results of the search for them overthrow your system, and leave you without recourse. Upon your own grounds, therefore, the microbe system is false—is but a tissue of contradictions in terms and conclusions, without a single authenticated fact to give it consistency and vitality." Similar diatribes are often pronounced of late by leading members of the Academy against microbes and their champions. The brilliant Professor Peter, of that distinguished body, in his withering denunciations of the microbe theory, holds that disease arises not from germs which *enter* the body, but are developed *in it*. It is the theory of this eminent Frenchman that life entails death, because in the physiological metamorphosis essential to its manifestation, certain bodies are elaborated which induce decay and cause dissolution. In fact, he contends that our systems are but laboratories for the preparation of poisonous compounds, which first contaminate and then destroy them.

Admit, even, that there is some truth in the microbe hypothesis, it is certainly remarkable that no germist or micrologist has yet found a germicide. That is what we all want—that is what our patients are clamoring for and demanding—that is what the profession have been anxiously waiting for and working for these many long years. The medical world is put where it was before and since the birth of medicine, including the period of these brilliant microbe discoveries, seeking for remedies adapted to special diseases, namely, specifics. If the germ theory should become fully established, the safest, best and most certain germicide, specific or remedy, can only be used in reference to indications; to suggestions founded upon experience, proper regard being had to its physiological effects. But let us not forget that in killing the microscopic germs we may also kill the giant upon which the little fellows are feeding. By all means let investigations be encouraged in this important line of medical progress as bearing upon the germ theory. We need all the light that is possible to be thrown upon the many dark places in our science.

The always important subject of malaria derives new interest in this germ relation because of recent experiments and discoveries. Laveran claims to have recently discovered in malarialized patients a peculiar microbe, which he asserts is not a bacterial body, but an amœboid organism, parasitic in nature, and infesting the red corpuscles. It is claimed that this organism is destructible by therapeutic doses of quinine. The assistants of Laveran, in the city of Rome, assume to have frequently verified this statement. Sternberg, of this country, says that he has demonstrated the same to Professor William H. Welch, of John Hopkins University, in whose laboratory the microscopic examination was made. The blood was drawn from a patient, it seems, in the outset of an intermittent paroxysm. Brought under the microscope, the demonstration of the amœboid organisms was made in the presence of several medical gentlemen, and to the satisfaction of Professor Welch. Sternberg cites his own laboratory experiments to show that the bacillus malarial of Klebs and Tommasi Crudelli cannot be destroyed by an amount of quinine that would be safe to administer. But the "amœboid blood parasite," as he calls the discovery of Laveran, is classed among the infusoria, and they seem susceptible to the action of quinine. Laveran claims that they are found in quantities more or less abun-

dant in proportion to the mild or pernicious character of the infection. It is asserted that no observer has found these peculiar infusorial bodies except in malarialized persons. Time alone will show whether these assertions and claims of Laveran and his followers will become to be established scientific facts.

It would be superfluous and wearisome to detain this enlightened medical body with a discussion of the various theories that have been advanced as to the nature and cause of malaria. As you are aware, Salisbury contended that he had discovered its cause in the algæ or spores of the palmella; Burdon Sanderson, that he had discovered in his pyrogen the essential factor, and that by inoculating a healthy subject with it he could produce undoubted malarial attacks. These theories proved to be only sensational. We are all familiar with the captivating views of our own distinguished countryman, Professor Mitchell, of Philadelphia. The old theory of Lancisi, that malaria is gaseous, held sway for a long period of time over the mind of the medical world. But it remains for future investigations and discoveries to establish the true origin and character of this subtle poison. Whether it is gaseous in form, or a chemical non-living substance, or a living organism, must be left to the scientific developments of the future. But whatever may be established as the true theory, it would seem that the combined action of heat, moisture and vegetable decomposition is essential to the production of malarial poison. This is the general observation and experience of physicians living in malarious localities. It seems to be well-founded that it gains entrance into the system by the inhalation of air, or by swallowing water containing it. More than one-half of the diseases of our State, especially of our eastern towns and counties, are due to its influence. Finding victims everywhere, insidious in its approaches, invisible, assailing, in preference, those of weakened vital forces, often masking its features and hiding itself behind some other malady, it is only to be routed when assailed by the forces at our command. It clings tenaciously to its old accustomed haunts in our eastern plains, fertile valleys, rich swamps, and along the basins and upon the borders of our streams. Causing two-thirds of the mortality of most warm countries, surely its origin and character cannot much longer be concealed from the knowledge of man. The opponents of the theory that malaria is a living substance, or caused thereby,

hold up the periodicity of malarial fevers as an argument to support them, but to this the reply is made that this periodicity is owing to vital changes and periodical developments in these living bodies, and that the morbid phenomena of malarial fevers depend upon the direct action of the malarial parasite on the system.

Those who contend that, be the nature of malaria what it may, the essential factors of its production are the combined action of heat, moisture and vegetable decomposition, are met by objections. These objectors say that such a statement is more declaratory and inferential than established. If this is true, say they, the want of uniformity of action of the malarial cause, in like seasons, localities and conditions would not exist, and malarial fevers would not differ, as they do, in amount and severity, under like circumstances. But those who hold with Lancisi to the extent that said factors, in combination, are essential to malaria, argue that the absence or innocuousness of it in certain seasons and in the same locality finds an easy explanation in this, that such seasons and localities are exempt from those atmospheric vicissitudes, that thermometrical and hygrometrical condition which experience teaches to be necessary to the evolution of malaria. These changing conditions of the atmosphere may augment its virulence one season and decrease it the next, or the poison may be neutralized in its action almost entirely. Every eastern practitioner knows that our sickliest malarial localities abound with much malarial sickness in some seasons, while in others, and under like physical conditions, the same localities are mostly exempt from malarial fevers. These objectors fail to admit that heat, atmospheric pressure and the purifying influence of winds, as these agencies vary in the changing phenomena of different seasons, are connected, more or less, with the modifications of the action of malaria and other etiological factors of disease. There must be an elevation of temperature, generally not less than sixty degrees, to develop the poison, and this range is sometimes presented in the winter and spring as well as in the summer and autumn of malarious regions. Hence it is that in such localities intermittents and remittents occasionally prevail in winter and spring as well as in summer and autumn. Unless the factor of sufficient heat is present the other two are imperative. If there is an excess or deficiency of moisture, if the soil is too wet or too dry, an essential factor is absent. And the same as to

vegetable matter, if too much covered with water, or so much obscured by foliage that decomposition cannot take place, another material factor is absent. The importance of the subject will bear the repetition that the septic properties of this substance demand for its development the action of the agencies essential to decomposition, that a certain amount of heat is necessary thereto, that there must be a certain amount of moisture, that an excess of it arrests decomposition, that its absence will have the same effect, that the poison is promoted or retarded by atmospheric influences, and that it is modified or prevented by elevated situations. These are the agencies and conditions recognized as potent factors in the generation of malarial fevers and the results bear a direct ratio to the potency of the causes producing them. The boundaries of malaria are generally measured by the activity and strength of these factors. It diminishes in activity and power as we proceed in a northerly direction. How high it ascends is not so well settled, some saying it rises only ten or fifteen feet in calm weather, others contending that it may ascend from twenty to sixty feet. It is more probable that its altitude depends materially upon the power and activity of the air currents, which are its wings. It is the experience of those living in malarious localities that those who select, especially at night, the second or third story of a house are more exempt from its attacks than those who sleep in a basement or upon the first floor while those residing upon ridges or elevated situations are less liable than those remaining day and night in the plains and valleys below. Nor is it settled how far its action may extend in a horizontal direction, the distance ranging from one to two miles or more, probably depending upon obstructions and the force of the winds. Though not so common as formerly in the middle and northern States, it is not absent, under favorable circumstances and favoring conditions, from certain localities of those States. Our negro population are more exempt from it than the whites, and when attacked more readily yield to appropriate treatment. It need hardly be said that it increases in activity in proportion to its proximity to the equator. Nor are the lowlands and river margins of the eastern counties alone the natural habitat of this dreaded foe of mankind. Mountain valleys and sandy plains present, under favorable conditions, a combination of causes that produce it. Sandy and alluvial plains, baked by the sun or covered with vegetation, give rise to it, espe-

cially if alternately wet and dry. An impervious sub-soil in the depressions that prevent the natural movement of the ground-water, with a porous surface soil, favors its development. Undisturbed porous soils are prone to give it off, while compact soils are comparatively innocuous until man's interference exposes them to the air. Build the houses and pavements of a city upon malarious soil and the malaria ceases, but remove them, even years after, so that the air and sun regain access to the soil, and it reappears. Virgin soil in similar localities that remain covered with a thick foliage of trees, does not, in general, emit it; but kill the trees and clear the land, and it abounds until vegetable decomposition ceases and drainage has made the soil dry. Conditions that favor the accumulation of stagnant ground-water and obstruct the purifying influence of atmospheric currents favor its development.

Tommasi Crudelli, the distinguished Professor of Hygiene in the University of Rome, Italy, delivered an address in August, 1884, before the International Medical Congress, at Copenhagen, upon hygienic questions relating to malaria. Before that august body he made the following remarkable statement: "The idea that intermittent and pernicious fevers are engendered by putrid emanations from swamps and marshes, is one of those semi-scientific assumptions which have contributed much to lead astray the investigations of scientists and the work of public administrations. This idea, so widespread and so well established by the traditions of the schools, is radically false." This is a denial of the observation and experience of the world that putrid emanations from swamps and marshes engender intermittent and pernicious fevers, and that heat, moisture and vegetable decomposition, when in combined action, are not competent to produce malarial fevers. This eminent scientist admits malaria to be "a specific ferment, which engenders those [malarial] fevers by its accumulations in the atmosphere which we breathe," but denies that it is even of paludal origin, or a product of putrefaction. If emanations from swamps and marshes do not originate malarial poison, whether it consists of living organisms or not, then the profession, in all ages and countries, have cherished false doctrines and grave heresies, and it remains for this great Italian hygienist to rebuke them for their stupidity and to strike the scales of ignorance from their eyes. His malarial views are antagonistic to the views and experience of the profession generally

of this Southern land. But he is only another living illustration of the large number furnished by the literature of malaria that it, too, has yet enthusiasts and fanatics, whose heresies have done, and are still doing, much injury to the cause of medical truth and sanitation. Erroneous and injurious also is he in saying that belts of forest trees, standing between low, swampy places and adjacent higher and healthy spots, afford no protection against this agent, to those living adjacent to the swampy places, but on the opposite side of the belt of trees. Trees *do* filter the infected atmosphere, and, by their limbs and foliage, *do* arrest malaria as it rises and makes wings of air currents. For this reason the intelligent farmer, if alive to his own sanitary interests, and a resident of a malarious spot, leaves a belt of woods between his residence and his lowland that he knows to be a hot-bed of malaria. Like so many others of our leading medical brethren on both sides of the ocean, who follow favorite theories and pride of opinion rather than the legitimate deductions of science, he had a special theory to sustain, and he did it, ingeniously, it is true, but upon fallacious grounds, and his conclusions are erroneous.

It is a significant fact of malaria, and of importance in a sanitary view, that those who, residing in malarious spots, abstain from drinking the surface water of wells or that of badly constructed cisterns, are more exempt from malarial disease than those who drink such water. The fact that water *does* attract, absorb and hold in solution malarial poison, has been too long and too generally neglected by our people in their arrangements for water supply and health. That the human system becomes infected in this way, as well as from breathing malarious air, is as true as that water, polluted by other substances, is productive of disease. In the one case the water becomes impregnated with malarial poison, and in the other with infection of another type. Bad drinking-water has been too greatly disregarded as a factor in summer complaints, autumnal fevers and other diseases incident to the different seasons. Our eastern people especially need reform in this important line of comfort and health. Water for drinking and cooking purposes should either be obtained from the bottom of good wells, uncontaminated by surface water or other impurities, or from good cisterns, constructed to exclude air, surface water and every impurity. Malarial poison not only lurks in the surface water of wells, springs and

badly-constructed cisterns, but in the turbid waters of our sluggish streams, muddy creeks and rivers, as they bear themselves to the ocean. Significant facts like these tend to settle a question often raised by objectors that heat, moisture and vegetable decomposition are necessary to malaria in this, that malarial diseases are sometimes found in hilly regions and mountainous sections, where these factors seem to be absent. But these objections fall to the ground in the face of the fact that these factors *are* sometimes found in hilly regions and mountainous sections. The physical condition of such localities, with their basins and obstructed low places alternately wet and dry, explain the liability to malarial fevers. The hills, valleys and mountains of the middle and western counties of our State are not destitute of malarial localities and conditions. While autumnal rains and winter snows bear back to the surface of the soil atmospheric and other impurities, acting as sources of disease, the natural streams of a country are nature's chains for bearing atmospheric as well as soil impurities, as so much sewerage, to the ocean.

More active near the surface of the ground, malaria moves like mists, rolls up hill-sides and climbs steep places. It is arrested by fires, sheets of water and trees. Ship crews lying to leeward of a malarious shore have been affected by the off-shore wind. It is liable to be generated in ships having cargoes of wood or other decaying vegetable matter, or timber and bilge.

More than a mere reference to the effects of this poison upon the human system would be superfluous before this large and learned medical body. That it tinges the skin, producing the well-known malarial physiognomy, poisons the blood, deranges the functions and nervous system, produces congestions and visceral enlargements and obstructions, as well as causes the entire family of malarial fevers, is a fact familiar to every practitioner in our eastern counties. Much of the anæmia, dyspepsia, asthma, neuralgia and other chronic affections of malarious sections originate from its action. Its chronic effects often lead to fatal structural changes of the liver, spleen and mucous membrane of the intestinal canal. These facts, so well known to our medical men, were even known to Hippocrates before he wrote on epidemics.

In regard to the symptoms of the different forms of malarial fever, they are so well known and so easily recognized, and the

remedial measures so general, uniform and familiar, that scarcely a word need to be said as to the symptoms or treatment. Mercurials and quinine continue to constitute the sheet-anchor of treatment in ordinary cases of malarial or bilious remittent fever. The former to arouse the sluggish secretions and stimulate the torpid biliary organs, the latter to break up the periodicity and continuance of the fever. Chronic malarial cases, such as those described, need to be treated upon general principles, involving the condition and constitution of the patient and other surroundings. They are often so complicated and difficult as to put the practitioner fully upon his mettle. Wherever malaria exists, whether the disease is acute or chronic in form, quinine is indispensable, and in doses to meet the nature of the symptoms. It is still the only known remedy to break up malarial diseases, acute, chronic or complicated; and this whether its antidotal power is that of a germicide or acts otherwise. In this respect no remedy can be compared to it. To whatever cause the antidotal or anti-periodic powers of this drug may be attributed, it is certain that it is the best specific or germicide known. Whether germicides are necessary or not in breaking up malarious disease, mercurials are necessary, and this whether germicidal virtues are considered, or anti-malarial or anti-bilious action is in demand. That calomel is potent to these ends, and is essential to the cure of a large number of our hepatic and inflammatory affections, and in larger or alterative doses, is as clear to my mind as that quinine is necessary in the treatment of periodical fevers and malarial complications of disease. If the case demands mercury, no prejudices against it deter me from its use. If the high grade of the disease or the violent nature of the case calls for more anti-phlogistic treatment in the beginning, no prevailing fashion nor denunciations of "obsolete practice," or "old-fogy ideas," serve to restrain me from using the lancet.

A few remarks here upon the general treatment of inflammatory diseases and febrile complaints, as they appear in these eastern counties, are appropriate. In this enlightened day of medical progress no physician is up with the times who is not guided in his practice by those principles of etiology, diagnosis, pathology and therapeutics as are legitimate deductions from science and experience. Of course he will always regard the modifications of climate, topography, season, type of disease and those conditions and peculiarities

that directly apply to the individual treated. In this way the judicious practitioner follows the lights of truth and experience. The disclosures of the pulse are, in my experience, of continued prime importance, while the temperature, tongue, secretions and excretions come in, of course, still for prominent consideration. The great fluctuations in the practice of medicine, not alone as regards the alternate employment and abandonment of certain drugs and lines of treatment, but as involving its general principles, while sometimes to be attributed to the influence of mere fashion and love of novelty, are, it is to be hoped, greatly owing to the inevitable results of increasing knowledge. Venesection, for example, so bitterly denounced for a great many years in any case, is less repudiated the last few years, when used in the first stage of very high fevers, powerful congestions and high grades of inflammation, especially if the patient is plethoric and not advanced in years. The physician who dares to use the lancet in these aggravated conditions, is not now regarded so much an old foggy, belonging to the antediluvian ages, as he was a few years ago. None are more ready to admit that the advisability of using the one or the other, or both, of these depleting measures, depends upon the nature, stage and type of the disease, and the condition and constitution of the patient, than are the advocates of antiphlogistic treatment under the aggravated forms named.

But pneumonia, always grave and critical, has become, to a great extent, the battle-ground of controversy in regard to its etiology, nature and treatment. Whether it is a local, inflammatory disease, or an essential fever, the pulmonary affection being secondary, is now the mooted question. It is held by leading physicians in our own and other countries that the views held for centuries as to the nature and etiology of pneumonia, are erroneous. From Hippocrates down to the present day, leading medical minds have held that cold is the most constant and potent factor in the production of this disease. An individual in full and robust health, exposed to severe cold, or to cold winds, or cold rain, or when heated, exposed to cold currents of air, is liable, in the opinion of medical men of all ages, to be stricken down with pneumonia so suddenly that, until recent years, no question was raised as to the connection of the exposure as the cause, and this disease as the effect. But a set of learned men, among those who claim that the germ theory has passed from the realm of speculation to absolute and established science, have come to the front in bold

denial of this doctrine of cold. These distinguished gentlemen hold that this local inflammation is an essential fever, and caused by micro-organisms, or the pneumo-coccus, as it is called. Our own distinguished American physician, Dr. Austin Flint, Sr., the Nestor of the profession in this country at the time of his recent death, was a strong believer in this theory. But even in the face of such high authority that pneumonia is an essential or specific fever, the result of a specific germ, it is certainly justifiable to say that the reasons given are unreliable and illogical. Bearing in mind that it is not a summer disease, when the warm weather and its attendant conditions are so favorable to the generation and activity of germ life—that it is much more prevalent in cold climates and in the cold and variable seasons of winter and early spring—unfavorable to germ life, is it not extremely improbable that it is caused by a specific germ, vegetable or animal? Is it reasonable that this pneumo-coccus should select its home in the lungs during the cold and chilly seasons, when pneumonia mostly prevails? Let us keep in the old paths until better ones are blazed.

Leaving this debatable ground, let it be borne in mind that inflammation of the lungs varies in danger at different times, stages and places. In the low, adynamic form it has generally assumed in this State for many years past, the lancet is seldom called for, even in the earlier stages. Cupping, counter-irritation, poultices, expectants and medicines that lower the temperature, support the system and tend, as quinine does, to break up the disease, constitute the general practice. Depletants, outside of a careful use of mercurials in the early stages, are seldom called for. But I have occasionally met with an uncomplicated case of pneumonia calling for the lancet as well as decided doses of calomel in the beginning, and have used both with benefit. Take the case of a strong, plethoric, vigorous man or woman, suddenly attacked with violent inflammation of the lungs. The symptoms are distressing. The face is flushed, the patient gasps for breath, perhaps unable to lie down, speech is difficult and the cough is a mere hack. Congestion soon spreads over a large portion of the lungs. There is violent action of the heart, but a weak, subdued pulse, owing to an insufficient amount of blood to the left ventricle, caused by lung obstruction. If the patient is to be saved, no time is to be lost. It is in such grave situations that I have used the lancet with benefit. As the blood flows the pulse improves, the breathing is less frequent, there is less difficulty in coughing, the patient is better in all respects, and

life saved. The *modus operandi* is not so much the direct reduction of the inflammation as a relief of the violent symptoms and of the pressure which causes an over-distention of the right side of the heart. Medicines to reduce temperature will aid these restorative tendencies, conjoined with such doses of calomel as are necessary to subdue inflammatory action, using quinine as a general thing in conjunction with remedies indicated.

But it is the complication of pneumonia, as it is that of diphtheria, intestinal disorders, hepatic derangements and other diseases, with the malaria of the locality and of the preceding summer and fall months, that we are compelled to deal much in these eastern sections of the State. The practitioner who recognizes this complication in his diagnosis and therapeutics is generally the most successful in his practice. Quinine is emphatically a *sine qua non* in the treatment of malarial pneumonia, the most common form of pneumonia in malarial localities. It may well be repeated that it is the best anti-septic and so-called germicide known. Nor can it be denied that mercurials are efficient and often necessary allies in the treatment of these malarial complications, and this whether the disease is primarily congestive or inflammatory. It seems to be more commonly the former. This is said because we often find that the cold stage of the invasion of pneumonia lasts for hours sometimes, and even days, attended with clammy perspiration, feeble pulse and evidence of additional passive congestion. This seems to be due to that paralytic condition of the capillary vessels of the lungs. Not until reaction is followed by fever are we apt to see signs of well-developed inflammation. To prevent its passage to the second stage, or that of solidification, tests the skill of the practitioner. It has not escaped the attention of the profession that in this feature and other characteristics of pneumonia, we have the testimony of that able physician and bold, original thinker in medical science, Professor Otis F. Manson, M.D. This distinguished physician, formerly of our own State, and now a leading practitioner of Richmond, Virginia, is one of those pioneers in Southern medicine who has shed new light along the pathway of his successful career. His observations, as made known in his numerous publications, were opposed for a long time, but are now generally endorsed in the experience of Southern physicians. That malarial poison, so often pent up in the system, may, by its morbid action, develop lung disease, is a fact of my own experience. It was the able researches and contribu-

tions of this Professor that early called my attention to this practical feature and emboldened me to follow him in the use of large doses of quinine. Often has it been my experience in the treatment of entire families, during the summer and fall, for malarial fever, that, as winter came on and continued, I have been called upon to treat, in succession, most or all of the members of the same family for pneumonia. This I have seen so often and for such a long series of years as to justify the conclusion that malaria and pneumonia are frequently related as cause and effect. In pneumonia, cholera-infantum, hepatic disturbances, intestinal congestions, fevers and inflammations, as they appear in our eastern counties, I always look out for malarial complications, and direct my treatment accordingly. The free use of calomel in the beginning of these is to prevent severe congestion and inflammation, followed by alterative doses, as indicated, not forgetting the free use of quinine, having regard to the bowels, skin and pulse, constitute the principal treatment, with good nutrition, tonics and stimulants to be used as changes and conditions call for them.

In the treatment of prevailing fevers in the east the intelligent physician does not fail to adapt it to the indications of the attendant type. In one season the sthenic form predominates, in another the asthenic. In some seasons, whatever the prevailing type, the cerebral disturbances are the greatest, in others the gastric. In some years, also, malarial fevers are more resistant to ordinary treatment, and are more prone to take on a continued form, giving rise to the belief, still held by many, that another etiological factor combines with malaria in causing the fever. While the name of continued, or continuous fever, finds favor with the majority, that of typho-malarial is still claimed by some to be the most correct and expressive. However this may be, prevailing fevers seem to be modified in character and form by the physical conditions of localities and climate, as are other diseases. The mooted question remains, whether two etiological factors can be in active operation in the system at the same time, causing a hybrid disease, or a mooted form of fever.

In this connection let me relate a striking and interesting case that came under my care and treatment in the winter of 1885. The patient was a white girl of twelve years. The case, when I first saw it, was undoubted typhoid fever. Two weeks previous she had been attacked with severe malarial fever, and was, on my first visit, scarcely convalescent. Her condition was one of danger for two weeks. Then,

to my surprise, diphtheria was developed. Thus was my little patient, still feeble from her malarial attack, suffering from two separate and dangerous diseases at the same time. I obtained, in consultation, the presence and services, at the bedside, of that able physician, Dr. William George Thomas, of Wilmington. We successfully combatted both diseases, but not until the sufferer had passed through the ups and downs, for several weeks, of this dangerous complication. Thus was the unusual spectacle presented of typhoid virus and of the poison of diphtheria existing in the same individual at the same time, to say nothing of the malarial poisoning.

A few words will here be in place upon Southern physicians. They are too prone to forget, in their admiration of medical brethren at the North and in Europe, that disease, as already intimated, very much derives its type and character from the topography and climate of the locality in which it appears, and that the treatment should be applied accordingly. More regard to this principle would enable us to be more successful in the diagnosis, preservation and treatment of both medical and surgical diseases. Fashion, and not science, or reason, or judgment, is too potent in inducing our invalids and sick people to seek Northern health resorts and Northern medical aid in preference to our own unsurpassed watering places. Southern methods of treating Southern diseases are more successful, in general, than are those practiced at the North upon Southern patients who go there for relief. Malaria is always more difficult to be eliminated when associated with slow, lingering diseases of any of the organs or structures. Patients, in such a condition, who go to a Northern or colder climate for health, recreation or treatment, encounter risks of getting worse, and many of them die because of the effects of such a change. Many sad and fatal cases of this kind, that occurred even within the last few years, are fresh in my recollection, and convey significant lessons. It is nothing new to assert the proneness of colder climates to develop and render more fatal Southern malaria when it is carried thence from warmer climates, and to aggravate chronic cases, which, with malarial poison in association, go North or to a colder atmosphere for treatment.

But however all this may be, let us continue to march onward to the goal of success in investigations of the etiology, pathology and treatment of disease. There are mysteries of malaria, typhoid

fever, yellow fever, cholera, hydrophobia, pyæmia, consumption and other diseases, yet to be solved. Southern scientists and Southern physicians are as able to make these investigations as are those of any part of the world. We have diseases peculiar to this Southern land, and general diseases modified by Southern topography and Southern climate, which Southern medical men can examine into successfully, and which they are able to treat with the most success.

And now, in conclusion, it is refreshing to know that, of the diseases mentioned, there is scarcely more than one or two not the result of avoidable or removable causes. The invading hosts of sanitation and general improvement, with their remarkable means and preventable measures, are more than ever coming to the rescue of the health and lives of our people. Those common enemies of the public good, in the production of fevers and other avoidable diseases, recognized in uncleanness, bad air, bad water, bad soil, bad ventilation, bad cooking and filth, are gradually leaving their old, accustomed haunts. If there is any truth in science and any dependence to be placed in patriotism and humanity in making and enforcing just and wholesome legal enactments, the days are numbered of the entire family of malarial and typhoid fevers, zymotic diseases, and other destructive, but yet preventable, diseases. The key to our deliverance is in preventive medicine, with its invincible measures of removal and means of prevention.

Let us not forget that the arch enemy of mankind, malaria, still lingers in our swamps and valleys and upon our eastern plains. Its poisonous domain still comprises a large portion of our State, embracing millions of acres of as rich swamps and fertile lands as the fairest regions of the earth present. It is under the will and dominion of man, as he wields against it the axe, the spade and the plow. Drainage and agricultural improvement are the great instrumentalities for banishing the fell destroyer from all our borders and opening up to the comfort and profit of man the magnificent regions of its present abode. Development of these great sources of wealth means not alone destruction to the deadly poison, but such an increase in the value of real estate and such an augmentation in the treasury of the State and counties as will show the expenses for the reclamation to be wise and every way profitable and judicious. Under such a health-giving and productive system the years will soon come when these vast regions of unreclaimed eastern lands will be under the dominion of profitable agriculture and the garden-spot of the State in prosperity, health and enlightened progress,

SELECTED PAPERS.

THE PROGRESSIVELY INCREASING MORTALITY OF THE CÆSAREAN OPERATION IN THE UNITED STATES.

By ROBERT P. HARRIS, M.D., of Philadelphia.

An abstract report of what I stated through Dr. W. H. Parish, before the American Gynecological Society at its late meeting in Baltimore, has been furnished our medical journals for publication in such a condensed form that it must necessarily fail in accomplishing the purpose for which the full record was prepared. The reporter, by reducing the facts to four lines, and leaving out entirely the most startling portions presented, has destroyed the progressive character of the statement. Forty years ago this country stood in the fore-front among the nations of the world in respect to its proportionate success under the Cæsarean operation; to-day, judging from the work of the last five years, we are almost at the bottom of the list. And this retrogression has taken place notwithstanding the fact that the possibility of the success of this operation in the United States, when performed under favorable circumstances, has amounted to a saving of seventy-five per cent. of the women and eighty per cent. of the children. To show that this is a possibility still attainable under proper care and management, we have only to cite the fact that, during the past year, European operators have, by the improved methods of Säger and Leopld, saved 18 out of 20 women, and 19 (possibly 20) children.

Prior to 1846, my record shows a credit to this country of 21 operations, with 13 recoveries and 10 children saved. In contrast with this, the last 21 operations, covering nearly six years, show a mortality of 18 women and 14 children; of the last, three having been destroyed by craniotomy, and one by the forceps, its cranium having been fractured.

In the decade from 1846 to 1855 inclusive, the record is as follows:

Number of operations....	25	Children delivered alive.....	13
Women saved.....	12	Children delivered dead.....	12
Women lost.....	13		

From 1856 to 1865 inclusive, ten years :

Number of operations....	25	Children living.....	10
Women saved.....	12	Children dead.....	15
Women lost.....	13		

From 1866 to 1875 inclusive, ten years :

Number of operations....	36	Children living.....	11
Women saved.....	10	Children dead.....	25
Women lost.....	26		

From 1876 to 1886 inclusive, ten and one-half years :

Number of operations....	37	Children living.....	16
Women saved.....	8	Children dead.....	21
Women lost.....	29		

As there have been five Säger operations performed in the United States, all ending fatally, with three children lost, there must be some readily ascertainable reason for the difference of results here and in Europe. We know that these operations were performed with care, as have been many others in the last ten years, which were likewise fatal ; but the most careful of operators cannot overcome the difficulties engendered by long delay and futile intermeddling on the part of one or several accoucheurs, preceded, as in some instances, by the patient waiting for nature, of a midwife. It is one thing to operate as soon as the proper time arrives, and quite another to do it under a conviction that this time has in all probability passed many hours, some days, or even a week or two. There would appear to be an intimate connection between the living of the fœtus and the success of the operation, an association which has also been very marked in the Säger cases. If our obstetricians had as good a knowledge of pelvimetry as prevails in the maternities of Austria, France, Germany and Italy, there would be much less delay, and fewer attempts to deliver, either by forceps or craniotomy, in cases of pelvic deformity, or other forms of obstruction. If the pelvic space is first accurately ascertained, its measure of diminution should at once determine the possibility or impossibility of delivery by version, the forceps, or craniotomy. It is certainly bad practice to fail first in craniotomy, and then be forced to deliver the destroyed fœtus, by opening the abdomen and uterus, with the increased risk to life engendered by the futile intermeddling.

The declination of the family is sometimes given as a reason for

delay ; but this objection to the use of the knife would not hold, if the parties in interest were made to understand that the operation was absolutely requisite, and that to delay was to lose the patient. Reduce the mortality, by promptness, decision and the best improvements in operation, and the dread of the knife will diminish as success becomes more frequent. Properly educate the obstetrician, and the surgeon will soon show what measure of fatality truly belongs to this part of the work. We are certainly justified, from the Snger successes, in our claim that *per se* the Cæsarean operation is far less fatal than it has been made to appear in the United States. The *possibility* of the operation is certainly far beyond its present *probable result* in this country, as calculated from past experience.

As this statement of results has been made entirely in the interest of science and humanity, the writer hopes that our medical journals will give it the widest publicity possible. Out of one hundred and forty-four cases in my private record, sixty-three were communicated, either by the operators or by other correspondents ; hence the value of the statistics, as showing the mortality under the operation. But for these unpublished cases we should have made a much more encouraging exhibit.—*Medical News*.

WOLPERT'S AIR-TESTER.

S. W. Abbott, M.D., Secretary of the Massachusetts's State Board of Health, describes in the *Boston Medical and Surgical Journal* a method introduced by Wolpert for ascertaining the quality of the air of inhabited apartments. The instrument consists of a simple rubber bulb (A), of a capacity of 28 C.c., a glass outlet tube (B), with a constricted extremity (E). A glass test-tube (C), 12 centimetres in length and 2 centimetres in diameter, has a horizontal mark near the bottom, indicating the point to which it must be filled with perfectly clear lime-water to contain 3 C.c. The bottom of the tube is whitened, and has a black mark (D) stamped upon it. A small wooden stand, a brush or swab, a vial of vinegar, for cleaning the tube, and a bottle of clear lime-water, complete the outfit. In order

to use the instrument, the lime-water (a saturated solution) should be poured in the tube to the mark. Press the bulb with the thumb, to expel the air as quickly as possible, and allow it to fill with the air of the apartment, insert the small tube into the lime-water nearly to the bottom, and again expel the air with moderate rapidity, so that the bubbles may rise nearly to the top of the tube, but do not overflow, taking care to continue the pressure of the thumb till the small tube is removed from the lime-water. Repeat this process until the mark upon the bottom of the test-tube is obscured by the opacity produced by the reaction of the carbonic acid upon the lime-water, the observer looking downwards through the lime-water from the top of the test-tube.



With very foul air, it is necessary to examine the mark after filling and discharging the bulb a few times only ; with good air, it must be filled twenty-five times and upwards.

The bulb represented in the cut is made a little larger than the required capacity, since the small amount of residual air usually remains in the bulb and cannot be expelled without great care. After each observation the test-tube must be washed out and wiped dry. If a white incrustation forms upon the tube, it may be easily removed with a little vinegar, after which the tube should be thoroughly washed with pure water and dried.

If the mark becomes obscured after filling the bulb ten or fifteen times only, the air of an apartment is unfit for continuous respiration.

In a sick-chamber the air should be so pure that the turbidity of the lime-water will not render the mark invisible until thirty or forty fillings are made.

The instrument should be used by daylight, over a white ground, as a sheet of writing-paper, and care should be taken not to vitiate the result by the observer's own breath.

The following approximate table is taken from the article by Professor Wolpert, the first column representing the number of fillings of the bulb, and the second column the parts per 10,000 of carbonic acid in a given sample of air :

Number of Fillings.	Carbonic Acid per 10,000.	Number of Fillings.	Carbonic Acid per 10,000.	Number of Fillings.	Carbonic Acid per 10,000.
1	200.	21	9.5	41	4.9
2	100.	22	9.1	42	4.8
3	67.	23	8.7	43	4.6
4	50.	24	8.3	44	4.5
5	40.	25	8.	45	4.4
6	33.	26	7.7	46	4.3
7	29.	27	7.4	47	4.2
8	25.	28	7.1	48	4.1
9	22.	29	6.9	49	4.1
10	20.	30	6.6	50	4.
11	18.	31	6.4	51	3.9
12	16.	32	6.3	52	3.9
13	15.	33	6.1	53	3.8
14	14.	34	5.9	54	3.7
15	13.	35	5.7	55	3.7
16	12.5	36	5.5	56	3.6
17	12.	37	5.4	57	3.5
18	11.	38	5.3	58	3.5
19	10.5	39	5.1	59	3.4
20	10.	40	5.	60	3.3

COCAINE IN OBSTETRICS.

By BARTON C. HIRST, M.D., one of the Visiting Physicians to the Maternity Hospital.

In the wards of the Maternity Hospital I have had an opportunity of using cocaine in a sufficiently large number of cases to convince myself of its efficiency in alleviating, if not entirely annulling, the pain of the second stage of labor, especially in its latter part, when the child's head begins to distend the lower portion of the vagina and the perineum. To still the cramp-like pain of the first stage of labor, I believe chloroform will still be found to be lost.

From the notes of a number of cases I select the two following :

Case 1.—A. B., primipara, aged twenty-two; labor began at 3 A. M., July 27, 1886. As the cervix was being dilated, and the head began to descend, the woman showed signs of great suffering, threw herself about the bed, became livid in the face; at 5 P. M. the first application was made; almost immediately the patient became quiet, and remained so till the birth of the child, of which she said she was hardly conscious; in all, there were four applications made from 5 P. M. to 8 P. M., the hour of the birth.

Case 2.—Mrs. D., aged twenty-four, primipara; labor began at 6 P. M. August 9, 1886. Os fully dilated at 1 A. M. August 10th. Child delivered at 5:55 A. M. As the head began to descend, and from then till the birth of the child, cocaine was applied every half-hour; for that length of time the woman, who was quite intelligent, said that the local anæsthesia was almost complete; at the end of that time, however, the effect of the drug seemed to wear off. The preparation used was an ointment of the strength of four per cent., applied with the finger, as evenly as possible, to the mucous lining of the vagina and to the skin of the perineum.—*Medical News.*

ON THE USE OF IODOFORM IN VENEREAL DISEASES.

The employment of iodoform in the treatment of venereal affections, though advocated as far back as in 1857 by Von Maitre, did not attain any repute with the profession until the disclosure of the eminent antiseptic virtues of the drug created a new and rationally founded basis for its therapeutic application. The fall of the previously extensively held opinion of the drug taking place about the same time aided, of course, no little the growing popularity of the remedy.

A decade or more having passed since the general introduction of iodoform into the therapeutics of venereal diseases, a critical review of the results of its clinical trials obtained thus far will be a study both timely and instructive.

Dr. Max Bockhart, treating of the same subject in the *Monatsshefte für Praktische Dermatologie*, No. 1, 1886, has collected all pertinent literary material with such care and painstaking, that no

abler guide could be selected for our discussion. We cannot, of course, view any other aspects of the proposed subject than those pertaining directly to the therapeutic practice. The following divisions recommend themselves for convenience' sake :

1. Iodoform in the treatment of gonorrhœal affections.
2. Iodoform in the treatment of soft chancres and buboes.
3. Iodoform in the treatment of syphilis.

I. IODOFORM IN THE TREATMENT OF GONORRHŒAL AFFECTIONS.

Watson Cheyne, in 1880, first proposed iodoform as an application in gonorrhœa. He employed iodoform bougies made from cacao butter, with the addition of eucalyptus. This author claimed that by allowing the bougie to remain in the urethra for four to five hours daily, and by using astringent and antiseptic injections besides, the gonorrhœal inflammation could readily be controlled in seven to ten days. Campana recommended in the first stage of an gonorrhœal urethritis an injection consisting of 6 dr. of iodoform and 3 grains of carbolic acid in 3 oz. of glycerin and 1 oz. of water. The researches of Mandl, Tarnowski, Keyes and Bockhart, however, could not verify the observations of Cheyne and Campana, and it soon became a therapeutic maxim that iodoform exerted not the slightest favorable influence over gonorrhœal inflammations of mucous membranes. Indeed, Bockhart even ascertained that a gonorrhœa of females treated exclusively with iodoform lasted longer than the cases treated with the usual disinfectant and astringent solutions.

Gonorrhœal epididymitis has also, and even sooner than gonorrhœal urethritis, been treated with various preparations of iodoform. Alvares proposed in 1877 the iodoform ointment, later Kurz the glycerite of iodoform, and finally Pape and Fischer the iodoform plaster. All of these authors claim to have obtained satisfactory results with iodoform in epididymitis, though Bockhart's experience could again not confirm them.

In erosions and ulcers of the cervix, however, such as are apt to follow a chronic gonorrhœa, iodoform, as all authors agree, renders the best of services. Dr. Wolf, of Würzburg, has the merit of having established a method of applying iodoform in these lesions which, in simplicity and promptness, surpasses all others. He fills little gauze sacks of the size of a chestnut, with finely-powdered

iodoform, and places them on the seat of the affection, where they are retained for twenty-four hours by means of cotton tampons. Previously the vagina, especially its cervical portion, is carefully washed out with two per cent. solutions of carbolic acid. Thus treated, even large erosions and ulcers disappear often in two to three weeks. To summarize, then, the first portion of our discussion, we may say that iodoform is of no service whatever in the treatment of gonorrhœal inflammation, but can claim for it a curative influence over ulcers and erosions of the cervix.

II. IODOFORM IN THE TREATMENT OF SOFT CHANCRES AND BUBOES.

Isard and Lazansky claim the credit of having first called attention to the advantages derived from iodoform in the treatment of soft chancres. Isard laid particular stress upon the fact that the new remedy produced no pain by its application, and that, compared with the formerly used means, its action was prompt and quick. He employed iodoform both as powder and in form of suspension in alcohol and glycerin (iodoform 45 grains, alcohol $2\frac{1}{2}$ dr. ; or, glycerin, 1 oz.), the former in superficially seated ulcers, the latter when cavities or concealed regions were to be reached. Lazansky introduced still another form of its application, viz : an ethereal solution (1 : 15 to 30), which is especially eligible when a protracted irrigation—as in phagedenic ulcers of the anus—is desired. Tarnowski noted that, under the influence of the iodoform treatment, the ulcers rarely assumed a phagedenic nature, and that by the rapid elimination of the specific detritus the danger of auto-infection was materially lessened. Nearly all observers agree that treated with iodoform the soft chancre loses in about two weeks its contagious character and enters the stage of reparation. In small chancres a strong ethereal solution, applied three times daily, will give the best results ; in larger ones Unna's ether-spray or the powder-dressing recommend themselves. Unna and Bockhart declare that the ethereal solution of iodoform, providing the ulcer with a suitably thin layer of the drug, gives better results than the powder itself. In soft chancres situated in the phimotic prepuce, Isard's suspension of iodoform in alcohol and ether, as stated above, is a choice application in phagedenic or diphtheritic ulcers ; the powder is preferable, and in chancres located in the urethra iodoform bacilli are indicated. The introduction of Unna's grated

iodoform-mull into the therapeutics of the soft chancre (*vide Monatshefte für Praktische Dermatologie*, 1884, p. 242) deserves an especial mention as a decided progress in the technique of dermatological practice. To epitomize the above, we may assume from the exceedingly rapid and favorable action of iodoform upon all kinds of soft chancres that the drug is a specific against the virus of the soft chancre. At least it is certain that no other drug, if it be salicylic acid, resorcin or nitrate of bismuth, can even approximately be compared with iodoform in healing effects upon the soft chancre. We can also add that these effects do not refer to the mechanical absorbent action of the powder-dressing, for other powder-dressings, such as those of nitrate of bismuth or oxide of zinc, do not have the same curative influence. We are compelled to believe in a chemical influence of the iodoform upon the virus of the soft chancre.

In the therapeutics of suppurating buboes resulting from soft chancres iodoform claims the character of a sovereign remedy. Isard and Petersen even credit the drug with abortive or preventive virtues regarding this suppurative inflammation, the former employing for the purpose iodoform ointment, the latter iodoform colloid. Still, this abortive power attributed to iodoform is not universally acknowledged. Very certain, however, is it that suppurating buboes under the iodoform treatment heal twice as rapidly as under the old forms of treatment. Under an exactly applied iodoform dressing, and strict observance of antiseptic precautions, the opened bubo never becomes phagedenic, diphtheritic, or chancreous in nature.

The principal methods of applying iodoform in suppurating buboes deserve to be especially alluded to :

1. Lazanski puts iodoform into the disinfected wound, and applies cotton lint (charpie), caoutchouc-paper, and a roller bandage over it, changing the dressing every twenty-four hours.
2. Martini employs precisely the same method, with the addition of scraping the wound with the sharp spoon.
3. Petersen's plan is undoubtedly the most perfect one. He employs what is known as the occlusion dressing, adding pressure to the dressing, as stated above. In this dressing flannel bandages only are used. With a perfectly-fitting occlusion-dressing the patient is well able to walk about with impunity.

Hence the conclusion to be arrived at from the foregoing statements is that iodoform is an unexcelled remedy in suppurating inguinal buboes, and that it is best applied by the plan proposed first by Petersen.

II. IODOFORM IN THE TREATMENT OF SYPHILIS.

Iodoform has been tried partly as a substitute for mercury by those opposed to the mercurial treatment of syphilis, and partly in place of iodide of potassium in the treatment of the tertiary forms of syphilis. The estimation of various observers of the value of iodoform as an antisymphilitic remedy varies materially. Von Maitre recommended first its internal use in syphilis, and claimed that 45 grains could be ingested daily with impunity. Davenport gave it in secondary syphilis, together with iron. Lazanski gave daily to twenty syphilitic patients (tertiary form) six to eight pills each, consisting of $1\frac{1}{2}$ grains of iodoform, and pronounced the action of the drug very efficacious. Moleschoff, likewise, eulogized iodoform in syphilis, and called attention to the fact that this drug is much more slowly eliminated from the economy than mercury, and is for this reason thereapeutically more active than the latter.

Other authors, however, like Zeissl, Strokowski, Tarnowski and Mraceck, after careful and numerous observations, have come to the conclusion that iodoform given alone internally in syphilis is but little reliable and useful. It is to be added that the drug causes certain secondary symptoms, such as gastric disturbance, vomiting, an acne-like eruption and nervousness, rendering its exhibition practically ineligible. Although the percentage of iodine contained in iodoform is much larger (ninety-six per cent.) than that contained in iodide of potassium (seventy-six per cent.), it is, nevertheless, possible to introduce into the system by the latter drug in a short time far greater quantities of iodine than by the former. Besides, iodoform cannot be taken with impunity in larger daily doses than 15 grains, while of iodide of potassium much greater quantities are well borne.

The results obtained with subcutaneous injections of iodoform, as proposed by Bozzi in 1870 and Thomann in 1881, are sufficiently satisfactory to engage our interest. The latter employed the glycerite of iodoform (6 to 20), and iodoform dissolved in oil of almonds

(0.3 to 6), using as an average dose as much as 12 grains of iodoform. Both in recent and in tertiary syphilis these authors obtained very gratifying results, 3 to 4 dr. of the drug being required for the cure of tertiary lesions. The local reaction after injections of iodoform is immaterial; the pain soon passes away, as do the induration and redness of the place of injection. An abscess has been recorded in only a single instance. Neumann used besides glycerin still other vehicles for his subcutaneous injections of iodoform, such as ether (1 to 15), and ether and olive oil (5 āā).

Neumann found by experiments on animals that from the glycerite of iodoform $\frac{1}{3}$ grain of iodoform, and of the ethereal solution $\frac{2}{3}$ grain of iodoform were resorbed daily. In a case where Mraceck had given in thirteen days $1\frac{1}{2}$ dr. of iodoform, he noted the elimination of the drug in the urine for a period of forty days. In another case Thomann found iodine in the urine forty-three days after the last injection of the glycerite of iodoform. These observations demonstrate that the glycerite of iodoform applied subcutaneously acts similarly as calomel applied hypodermically: from the drug deposited into the cellular tissue small quantities are being constantly and for a long time dissolved, and enter the circulation. This peculiar action of iodoform renders the drug particularly eligible in the light tertiary forms, while in the grave gummous processes, necessitating the rapid introduction of larger quantities of iodine, iodide of potassium, being more rapidly and in greater quantities resorbable, is far preferable. In conclusion, the beneficent action of iodoform in syphilitic neuralgia is to be mentioned. Daily doses of 15 grains of iodoform, taken in pill form, are regarded as a promptly-acting remedy.

To resume the above, we find iodoform as an antisymphilitic remedy inferior to iodide of potassium, surpassing the latter only in syphilitic neuralgia. Employed subcutaneously, however, the drug, especially in the light tertiary forms, produces a far more constant and effective an action on the organism than iodide of potassium.

THE PHYSICAL ACTION OF IODOFORM.

Our knowledge of the physiological action of iodoform has in the last few years been materially enriched by the labors of Prof. Binz and other German observers. Let us review, in brief, the

essential features of the physiological action of the drug. Placed upon an ulcerating surface, iodoform is gradually dissolved by the fatty substances present in that locality, and liberates iodine in the presence of oxygen and light or of oxyhæmoglobine and living cells. It is to the thus continually generated free iodine that the antiseptic and antibacterial virtues of iodoform are to be ascribed. The action of iodoform upon the blood-corpuscles is a very singular one: it prevents their emigration from the blood-vessels by paralyzing the protoplasm of the blood-cells, and besides, prevents the formation of giant-cells. The analgesic effects of iodoform upon ulcers are explained by Binz as being due to a paralysis of the axis cylinder of the exposed nerve termination produced by the liberated iodine. The iodine enters also the juices of the body and associates with their albuminous constituents, the thus formed albuminate of iodine being, however, soon decomposed into an iodide and an iodate. In tissues or an acid reaction (the cortex of the brain and gastric mucous membrane) iodine regains its former state of integrity, and again reacts upon the cells of the part. This explains the partly irritating and partly depressing influence of iodoform upon the cervical cortex and its tendency to provoke serious gastric disturbances. Experiments made upon animals revealed fatty degeneration of the heart, the liver and the kidneys as the result of the action of iodoform. Even after the ingestion of large quantities of iodoform, the resorption from the intestinal tract is very limited as compared with the resorption proceeding from granulating surfaces and wounds. In the urine iodoform appears as an iodide and an iodate. This elimination proceeding, however, very slowly, the action of the drug upon the economy is evidently a prolonged one.

We cannot conclude our discussion without referring, with a few words, at least, to the intoxication phenomena, as occasionally recorded after the application of iodoform. In the first place, we mention the acne not rarely observed after the internal and subcutaneous employment of iodoform, resembling closely the acne produced by the internal use of iodide of potassium. Besides this acne a peculiar exanthematous dermatitis is often observed after the external application of the drug, especially in presence of a certain predisposition on the part of the patient. This eruption is readily cured by a dressing with argillaceous earth, or with a two per cent. solution of carbolic acid in alcohol. Grave cerebral intoxications, such as frequently described

by surgical writers, occur but rarely in the treatment of venereal affections, unless it be in presence of the idiosyncrasy mentioned above. Besides, iodoform is no longer used in such large quantities as was practised in the past. Oberländer reported two grave intoxications with iodoform which deserve to be noted. Two syphilitic patients, who had received 10 dr. of iodoform in eighty days, i. e., 75 grains in seven days, showed threatening cerebral symptoms, such as coma and collapse, which persisted for a long time, and finally passed away.

To disguise the repulsive odor of iodoform many agents have been proposed, among which we mention cumarine, the tonga-bean, the oil of peppermint, the oil of bitter almonds, Peruvian balsam, Muscat balsam, tannic acid, and recently pulverized roasted coffee. This agent being itself an antiseptic, and incorporable with iodoform in any proportion, is undoubtedly the safest, as it is the most effective of all substances recommended for the disguise of the odor of iodoform. If the chancreous ulcers of the penis are treated with Unna's grated iodoform plaster-mull, the taste of the drug is easily disguised by fixing a layer of odorized cotton (with cumarine) over the plaster.—*Therapeutic Gazette*.

MILITARY DRILL AND GYMNASTIC TRAINING IN PHYSICAL CULTURE.

By E. M. HARTWELL, PH.D. of Johns Hopkins University, in remarks made at the meeting of the Section in Clinical Medicine, Pathology and Hygiene of the Massachusetts Medical Society, Suffolk District, June, 1886.

I feel some embarrassment in standing here as an advocate of the superiority of gymnastics over military drill as a means of physical training for school-boys, since, in so doing, I am obliged to dissent from the views of General Moore, who was formerly my commanding officer. I suppose that, as one of his orderly-sargents in the Latin School Battalion, I passed the climax of my self-importance. I thought then that the drill was a very good thing. I think now that it did the other boys good, and that it did me

good, but I am compelled to think, as the result of my reading, observation and experience, that, while much good may be accomplished through military drill in boys' schools, very much more good can be attained through a well-devised and intelligently-managed system of gymnastics.

It is a noteworthy fact that physical training has always owed much to lessons learned in war. Under the sting of defeat, or the stimulus of victory, the most enlightened and the rudest nations have alike been impelled to give to bodily training a place in their schemes for the education of their youth. It was in the half century following the victories gained by the Greeks over the Persians, that Greek gymnastics saw their palmyest days. It was then that the gymnasia furnished the finest models for the noblest specimens of the sculptor's art. Although the Greek training was chiefly general and educational in its aims, it embraced certain exercises of a martial character. The Northern archers made such an impression upon the English at Hastings, that centuries elapsed before English law-givers ceased to legislate for the training of the people in "Shooting."

An English law passed in 1388 required servants and laborers "to have Bows and Arrows and use the same the Sundays and Holydays, and leave all playing at Tennis or Football and other Games called Coits, Dice, Casting of the Stone, Kailes and other such importune Games." Henry VIII. caused Parliament to enact, in 1511, that "every man being the King's subject, not lame, decrepit or maimed ; being within the age of sixty years, except spiritual men, justices of the one bench and of the other, justices of the assize and barons of the exchequer, do use and exercise shooting in long bows, and also do have a bow and arrows ready continually in his house, to use himself in shooting ; and that every man having a male child or men children in his house, shall provide for all such, being of the age of seven years and above, a bow and two shafts, to learn them and bring them up in shooting." Each village was, in 1541, required to maintain a pair of archery butts. It would seem that this statute was held to apply to school-boys and collegians. It is noteworthy that certain playgrounds at Eton and Harrow, respectively, are still termed the "Shooting Fields" and "the Butts." The English took the lessons of the Crimean War so deeply to heart that, great as is their aversion to gymnas-

tics, they introduced gymnastic drill into the army in imitation of their neighbors on the Continent.

The quickening and shaping influences of the Napoleonic Wars, of the War of Liberation, and of the wars with Austria and France, are clearly discernible as potent factors in the development and organization of the German system of physical training. France has, since 1871, organized an elaborate system of physical training, embracing both gymnastic exercises and military drill in connection with all its public schools for boys.

We in America occupy no exceptional position in this matter, unless it be that we are preternaturally slow to profit by the experience of other nations. The first attempts in America to promote physical training were of a military character. On January 21, 1790, President Washington transmitted to the first Senate of the United States a comprehensive report from General H. Knox, the Secretary of War, on a plan for "a national defense system adequate to the probable exigencies of the United States, whether arising from internal or external causes." The plan called for the enrollment of those liable to bear arms into three classes: the first comprehending the youth of eighteen, nineteen and twenty years of age, to be denominated the advanced corps; the second class including the men from twenty-one to forty-five years of age, to be denominated the main corps; the third class comprehending, inclusively, the men from forty-six to sixty years of age, to be denominated the reserved corps. It failed, however, of adoption, although the need of a well-trained militia had been sharply and abundantly emphasized by the events of the Revolutionary War. The failure was attributed to the great expense and the administrative difficulties which it was believed it would entail.

In 1792 a United States law was passed, which is still in force, I believe, requiring the enrollment of "all able-bodied male citizens of the respective States" between the ages of eighteen and forty-five years. All enrolled citizens are required to be "constantly provided with a good musket or fire-locket, * * * a sufficient bayonet and belt, two spare flints, and a knapsack, a pouch therein to contain not less than twenty-four cartridges, * * * or with a good rifle, knapsack, shot-pouch and powder-horn, twenty balls suited to the bore of his rifle, and one-fourth of a pound of powder." So far as I know, neither the Boston School Regiment, nor any other regiment, complies with the requirements of this law.

In 1817, in a report of the organization of the militia, made to the House of Representatives by Mr. Harrison, it was recommended that "military instruction should not be given in distant schools, but that it should form a branch of education in every school within the United States; *that a corps of military instructors should be formed to attend to the gymnastic and elementary part of education in every school in the United States*, whilst the more scientific part of the art of war should be communicated by professors of tactics, to be established in all the higher seminaries." It does not appear that this scheme, or anything like it, ever received the sanction of law, although it was again brought forward for adoption in 1819.

Meanwhile, the United States Military Academy at West Point, in New York, had been instituted for the professional training of army officers. Yet the bitter lessons of the war of the Revolution had to be enforced by those of the War of 1812 before Congress could be induced to make anything like adequate provision for such training.

At West Point, bodily training, under the heads of military instruction and sword exercise, has received marked attention from the first. Dancing is now regularly taught, and gymnastics and swimming have at times been regular branches of instruction. The United States Naval Academy dates from the year 1845. Both at West Point and Annapolis the course of study is characterized by an extended, varied and exacting system of bodily exercise, as embraced in the various drills and branches of practical instruction. The absolute control and constant supervision and inspection to which all cadets are subjected, as regards deportment, dress, studies, exercise, recreation, diet and rest, are productive of a vigorous manliness, which is much less uniformly found in the graduates of other institutions. I am strongly convinced that the best that has as yet been accomplished in the United States in physical training has been accomplished at West Point and Annapolis, but nothing can be clearer than the fact that only a very small part of the training there in vogue is what is understood as military drill in the Boston schools.

Alden Partridge, captain of engineers in the United States Army, who was for a time Superintendent of the Military Academy, seems to have been the first person to found an institution modelled after that at West Point. Captain Partridge left the Military Academy in 1817, and in 1818 resigned from the military service of the Government. In a lecture delivered by him in 1820, on what he considered

to be the deficiencies of superior education, as then conducted, Captain Partridge spoke as follows:

"Another defect in the present system is the entire neglect, in all our principal seminaries, of physical education. The great importance, and even absolute necessity, of a regular and systematic course of exercise for the preservation of health, and confirming and rendering vigorous the constitution, must be evident to the most superficial observer. That the health of the closest applicant may be preserved, when he is subjected to a regular and systematic course of exercise, I know from practical experience; and I have no hesitation in asserting that in nine cases out of ten it is just as easy for a youth, however hard he may study, to attain the age of manhood with a firm and vigorous constitution, as it is to grow up puny and debilitated, incapable of either bodily or mental exertion."

Captain Partridge opened his American Literary Scientific Academy at Norwich, Vermont, his native town, September 4, 1820. In 1825 he removed his seminary to Middletown, Connecticut, where he remained for three years. He was doubtless impelled to abandon his seminary there from the refusal of the Legislature of Connecticut to charter the institution as a college. He was instrumental, in 1834, in rehabilitating the institution at Norwich, which became known as "Norwich University," and in establishing military schools at Portsmouth, Virginia, in 1839, at Brandywine Springs, Delaware, 1853, and at Bristol, Pennsylvania, in 1853, the year of his death.

A considerable number of military schools and colleges, additional to those above mentioned, were organized before the War of the Rebellion. The more important of them were established in the Southern States, and were in several cases subsidized by the State. This was notably the case in Virginia, South Carolina, Louisiana, Kentucky and Alabama. The Virginia Military Institute, at Lexington, Virginia, the Military Institute at Frankfort, Kentucky, and the Louisiana State Institute, at Alexandria, Louisiana, should be mentioned in this connection. It has been estimated that "one-tenth of the Confederate armies was commanded by the *élèves* of the Virginia Military Institute, at Lexington, embracing 3 major-generals, 30 brigadier-generals, 60 colonels, 50 lieutenant-colonels, 30 majors, 125 captains, 200 to 300 lieutenants. General "Stonewall" Jackson was long a professor in the Virginia Military Institute. General W. T. Sherman, of the United States Army, was in 1861 the head of the

Louisiana State University, which had been organized on a military basis in the previous year. At the North the military plan of education was chiefly adopted by the proprietors of private schools for boys.

Once the war opened, military drill assumed a new and unprecedented interest in the eyes of school authorities. The educational literature of that period teems with schemes for the introduction of gymnastics and military drill into public school courses. As early as 1861 military drill was introduced into a portion of the public schools in the city of Bangor, Maine; and the State of New Jersey, about the same time, made an appropriation of money for military instruction in her normal school.

Elementary military drill was experimentally introduced into the Public Latin, English High, Eliot and Dwight Schools for boys in Boston in 1863. It has since been eliminated from the grammar schools, to which class the Eliot and Dwight belong, but has been introduced into all the high schools of the city for males.

There are not far from sixty schools and colleges, in various parts of the country, in whose course of instruction military drill is given a prominent place. Public schools are not included in this number, but in nearly half of the number the military drill is in charge of an army officer, specially detailed in accordance with the Morrill Act of 1862, whose purpose was to promote the organization of State Mechanical and Agricultural Colleges.

The aim of the school system of Boston is, I take it, a general one, namely, to prepare boys and girls to enter with profit, at a later stage of their development, upon courses of special training for their life-work, and the question under discussion is not whether military drill, by itself considered, is helpful or harmful, but whether so much of military drill as is laid down for a portion of the school-boys of Boston constitutes an adequate system of physical training.

I freely admit that the setting up drill, the manual of arms and the marching movements as taught by General Moore are valuable; that they promote healthful growth and development to a limited degree; and that they subserve certain ends of mental and moral discipline. But I hold that they are so narrow, unnatural and technical that they cannot be made to meet the legitimate demands of a sound system of general physical training. Such gymnastic exercises as you have witnessed here this evening demonstrate very satisfactorily, it seems to me, the superiority of gymnastic to military drill. But it should be

borne in mind that these exercises constitute but a small portion of the exercises which are comprised in any system of school gymnastics worthy to be so designated. It need hardly be said that no comprehensive system of gymnastics has ever been attempted in the Boston schools. No city in the United States, unless it be Kansas City, in Missouri, has as yet worked out or adopted a system of school gymnastics that will bear comparison with the systems now in vogue in the schools of the principal cities of Germany, Sweden and Norway, France, Switzerland and Austria.

It will be best to confine our attention to the German system of physical training, and more especially to that in vogue in Prussia.

The German for gymnastics is *Turnkunst* or *Turnen*. *Turnplatz* and *Turnhalle* correspond respectively to our terms out-door gymnasium and gymnasium, which latter ordinarily signifies a building for gymnastic exercises. A gymnasium, in the German sense, is the highest of the secondary schools, and leads directly to the University.

German gymnastics embrace three well-marked fields, or departments, namely, *Volksturnen*, or popular gymnastics; *Schulturnen*, or school gymnastics; and *Militärturnen*, or military gymnastics. The organization of the last two departments is maintained and controlled by the Government for strictly educational purposes; whereas the *Turnvereine*, as the societies of the turners are called, are voluntary associations of a social and semi-educational, but wholly popular and patriotic, nature. The germ of the turning system is to be found in the martial games and exercises of the ancient Teutons.

Volksturnen was the first to develop. It had its beginning in the period of Prussia's deepest distress and humiliation—the period between the victory of the French at Jena, in 1806, and the War of Liberation, in 1813. The turning became a popular institution and a potent factor in the development of Prussia was largely due to "Father Jahn," as the turners call him.

Jahn was an ardent patriot. His strong and rugged nature, and his eager, restless, passionate spirit, qualified him for popular leadership in the movement which he initiated. He seized the idea of making bodily training a force in national regeneration and education, and dreamed and wrote and labored for a free and united Germany.

The turners did notable service in the campaigns against the French, and great enthusiasm for gymnastics was kindled all over Germany. From 1819 till 1842 the *turnvereine*, as the gymnastic societies are called, were not suffered to exist by the Government.

In April, 1842, the ministers of war, the interior and education, united in recommending to the King of Prussia the reintroduction of turning. In June following the King gave his sanction to the proposal of his ministers that "bodily exercises should be acknowledged formally as a necessary and indispensable integral part of male education, and should be adopted as an agency in the education of the people." The King also authorized the establishment of "gymnastic institutes," in connection with "the Gymnasien, the higher middle schools, the training schools for teachers, and the division and brigade schools in the army."

The great majority of German turnvereine have, since 1860, belonged to the organization known as the *Deutsche Turnerschaft*.

The Turnerschaft comprises fifteen circuits, or geographical divisions, within the German Empire and Austria. Each circuit is subdivided into districts (*Gaue*), and each district into societies (*Vereine*). On January 1, 1885, there were 220 *Turngaue* within the Turnerschaft, and the number of vereine within the Turnerschaft was 2,878, an increase of 223 over 1884. The membership in 1885 was 267,854, of whom 114,134 were active turners; or, to express it differently, in 2,413 localities there was an *active* member of the Turnerschaft for every 134 of the population. In 1884, 2,409 societies practised winter turning, 353 owned a turnplatz, and 182 owned a turnhalle.

The aim of the Turnerschaft is to promote the interests of turning, as a means to bodily and moral strength. Its members are urged to render turning attractive to boys and apprentices who have passed the school age; to cultivate simple German customs and manners; to cultivate national exercises and games, such as free and class exercises, running, leaping, climbing, casting the weight, hurling the spear, wrestling, fencing and sword play; to participate in all popular festivals, especially those commemorative of national events, such as the Kaiser's birthday, Sedan day, and the like; to manifest an active interest in useful public enterprises and associations, such as fire and salvage companies, and sanitary corps for the care and transportation of the sick and injured.

The turners are divided into two main sections, namely, boys from fourteen to seventeen years of age, and men. These divisions are subdivided according to their gymnastic ability into squads, or classes, each class being under the lead and guidance of a "fore-

turner" chosen on account of fitness. Strength alone is not enough. It is the foreturner's business to make his squad as expert as possible, and, above all, to secure to each of its members an erect, firm and graceful carriage of the body.

The General German Turning Festival, as the grand festival of the entire Turnerschaft is termed, occurs at intervals of at least four years. It continues for at least three days, one of which must be Sunday. Six such festivals have been held in different German cities since the first was celebrated at Coburg in 1860. The Sixth German Turning Festival was celebrated at Dresden, July 18-23, of last year. I was so fortunate as to be present during its continuance.

The festival was characteristically German in its object, arrangements and detailed workings. In the opinion of competent judges, a very considerable increase in gymnastic proficiency over that exhibited at any former festival was noticeable.

More than 20,000 turners, including delegations from England, France, Russia, Holland, Switzerland, Austria, Hungary, Sweden and the United States took part in the street parade, which was reviewed by the King of Saxony from a balcony of his palace on Sunday, the first day of the festival. The grounds set apart for the use of the turners were something more than ten acres in extent, and were situated in the outskirts of the city, adjoining the Grosser Garten, the principal park of the King. Chief among the temporary buildings erected on the Festplatz was the festival hall, with an estimated capacity for 10,000 people. The main part of this hall was left unfloored, so that, in case of unfavorable weather, all the heavy gymnastics might take place under cover. As the weather was fine during the entire continuance of the festival, the hall was used chiefly for speech-making and merry-making, and the turning of every description was carried on out of doors on the Turnplatz, which had an area of more than three-quarters of an acre.

The most note-worthy gymnastic features of the festival were: The free gymnastics; the class turning of the most proficient turners; the prize turning, and the gymnastic games in which 1,600 girls and 1,200 boys belonging to the Dresden School took part.

The free gymnastics are bodily movements arranged in groups of related exercises, which are executed at command and in unison. In them an apparatus of any kind is made use of. They may be

characterized as calisthenics raised to their highest power. The free gymnastics on this occasion included sixteen different movements, and required nearly three-quarters of an hour for their completion. The order and character of the movements had been determined and ordained by the proper committee of the Turnerschaft months before, and the movements had been practised by the different vereine at home, but only there. The turners who took part in the free movements numbered 4,544, and were formed in seventy-one "open ranks" of sixty-four men each, facing toward the front, the distance between the "files" being a full arm's-length. Facing the huge class was a high platform, on which two marvelously expert foreturners first executed each movement in sight of the class, and then, at signals given with a flag by the turnwart in command of the class, and re-enforced by strokes given on gongs in the middle of the field, the foreturners repeated the movement, the entire body of 4,500 men following in unison. The sight of 4,500 bare-headed, white-shirted men, many of them gray-headed, executing complicated movements, which involved tossing of the arms, bowing and bending of the trunk, facing now this way and now that, and all with military precision, in nearly perfect time, was a novel and inspiring one. Would that those who belittle gymnastics as a means of discipline could have seen the marching and facings of that class of 4,500 men.

The essential differences between Volksturnen and Schulturnen are based on the fact that the former is a free art, originating with, and maintained by, the common people, and the latter is a discipline imposed by authority upon persons in a state of pupilage. The ends of training and education are not lost sight of in Volksturnen, but in Schulturnen they occupy the foreground.

As regards physical training in the schools of Prussia, the case stands thus: Attendance upon instruction in turning is exacted of all unexcused pupils for two hours weekly in all schools for boys, and also, in some cities, in all schools for girls. As a rule, each school has its own turnhalle, and in very many cases its own turnplatz, furnished with appropriate gymnastic machines. Some cities, for instance Frankfort-on-the-Main, provide special play-grounds for the use of school children and instruction in swimming.

While gymnastic drill is not universal in the public schools, it is very general. As might be expected, it is more common and better

provided for in the cities than in the country. In 1882 only ten per cent. of the pupils in the higher schools for boys were excused from turning, and they were excused on the certificates of physicians that the exercise would be prejudicial to their health; only eighteen per cent. of this class of schools were obliged to discontinue turning in winter through having no proper turnhalle, and sixty per cent. of them possessed a turnhalle.

In the course of study each class has its special time for gymnastics, just as it has special hours set for arithmetic and reading, and in the majority of cases the instruction is given by one of the ordinary class teachers, and not by a special teacher of turning. The amount of time devoted to turning, singing and drawing, is usually the same, viz : two hours weekly.

The exercises are carefully adapted to the age, strength and sex of the pupils. The youngest pupils, from six to ten years old, engage in a variety of simple games, easy, free movements, marching, jumping and climbing exercises and the fundamental exercises on the easier gymnastic machines. In free, light and heavy gymnastics the exercises grow more complicated and difficult with the advancing age of the pupil. The expertness of the boys in the upper classes is often quite astonishing. In the *Gymnasien* and *Realgymnasien* fencing is taught in the upper classes. Pedestrian tours, skating parties and excursions into the woods are frequently made under the lead of those who teach turning. The gymnastic course for girls comprises the ordinary free gymnastics; class gymnastics with "hand apparatus," such as dumb-bells, wands and skipping ropes; marching, dancing and balancing exercises; various games of ball, easy jumping, swinging and climbing; and a few of the simpler exercises on the parallel and horizontal bars. Singing, especially during the march and the minuet, is frequently engaged in during the hour given to gymnastic instruction.

The population of Berlin in 1880 was 1,122,330. The total number of pupils in schools of every kind in the city was more than 149,000, of whom not more than 25,000 were in private schools. In schools wholly maintained at the city's expense, there were 104,726 pupils. Of the 62 turnhallen belonging to the city, 41 had turnplätze adjoining or near to them; 2 belonging to higher schools for girls; 11 belonged to higher schools for boys; and 48 belonged to schools of the grade of *Volkschulen* (termed in Berlin *Gemein-*

deschulen) ; and 1 belonged to the German Orphan Asylum. The city paid nearly \$50,000 in 1880-'81 for the instruction given its school children in gymnastics, which sum is equal to about one-twenty-third of its total expenditure for schools in that year.

The present number of city turnhallen used for educational purposes in Berlin is 98. The largest of them is the *Stadtische Turnhalle*, in the Prinzenstrasse. This was established in 1864 ; it is open every day and evening, and is used at appointed times by several of the Berlin turnvereine, also by the association of Berlin teachers, the royal firemen, the normal classes for teachers of turning, and by eight of the city schools for school turning. In all, more than 13,000 persons exercise here weekly. The annual appropriation for its maintenance, exclusive of salaries, is between \$2,500 and \$3,000.

As a rule, the school gymnasia in Germany are separate and specially designed buildings, and not refitted rooms. As a class, the German gymnasia are not so luxuriously fitted or so architecturally imposing as many of the newer American college gymnasia, but they are admirably adapted to the purpose of teaching of free and class gymnastics of every description. As much as possible the apparatus is adjustable and portable. A plain, one-story, brick turnhalle, 60 by 33 feet and 15 to 20 feet high, can be built in Germany at a cost of \$5,000, and well furnished with apparatus for \$1,000.

In this connection the following facts regarding the Volksschulen of Vienna may be of interest : In 1882-'83 Vienna, whose population in 1880 was 704,756, had 72,912 pupils in its 135 Volksschulen. Of this number 44,614 (21,047 of whom were girls) practised turning under the guidance of 658 teachers. The city paid for the teaching of turning and the care of the turnhallen in 1882-'83 a sum equal to \$34,860, or one-twenty-ninth as much as its total ordinary expenditure for the Volksschulen.

The Prussian schools and the Prussian army are admitted to be the best of their kind. It is a fact of capital importance that in the foremost military State of all the world, not only is military drill excluded from the system of public instruction, but it is also held to be insufficient for purely military purposes, and an elaborate system of gymnastics has been adopted for the training of the soldiery. Even in the cadet schools, boys under fourteen years of

age are not allowed to drill with muskets. In Prussia, as in other parts of Germany, it has often been proposed to make military drill a part of the instruction for boys. The proposition has been widely and fully discussed, but the weight of the best opinion, educational and military, have been against it. Such experiments as have been made in the direction of giving the schools a military character have not succeeded. On physiological, educational and military grounds, the authorities prefer gymnastics to military drill, both as a means of securing the symmetrical development of the bodily powers, and as a preliminary training for efficient service in the army. Military drill, say the best of the Germans, is, if genuine, too stiff and severe for school boys; while, if it be not genuine, its moral effects are bad and its tendency is towards the formation of vicious habits of carriage and movement.

Gymnastics and military drill have been made obligatory in practice in all public schools for boys throughout the French republic. It is a little more than four years since the French government passed a law requiring the enrollment of all able-bodied boys over twelve years of age in the so called *bataillons scolaires*. The boys wear a sort of uniform, and are dubbed with muskets, and figure with the rest of the troops on July 13th, the day of the National Festival.

The Germans look with disfavor, but not with fear, upon this movement of the French. It is somewhat too early to pronounce upon the success of the experiment, but there are indications that it is not fulfilling the claims of those who were instrumental in causing it to be made. One of the French military journals characterizes the movement as "a useless phantasmagoria," and General Millot says: "Do not let children play at soldiering. The musket should not be taken in hand too soon. It is only in the barracks that the military training of a young man is properly given. Train gymnasts for us; our officers and under-officers will soon make good soldiers of them."

The best exponent of the German system of training in this country is the North American Turnerbund, which comprises more than two hundred societies or *Vereine*, and has a total membership of more than 21,000. In the Turnschulen of the Bund, 12,228 boys and 4,005 girls received instruction in gymnastics in the year 1884-'85. It is very remarkable that the ignorance of American

educators should be as dense as it is regarding the aims and achievements of the Turnerbund, which has maintained a special Normal School for the training of teachers of turning for many years in the city of Milwaukee. Yet the fact is that the Turnerbund owns more gymnasia than all the colleges of the country put together, and its corps of trained and salaried teachers, numbering nearly one hundred, is the best the country affords.

The German system of school turning embraces free movements, light gymnastics and heavy gymnastics, all of which may easily be taught to school or college classes, provided you have competent teachers and a well-equipped gymnasium. The German system of physical training is a practical system, based upon sound physiological and pedagogical principles. It is managed by specially-trained teachers, who have perfectly definite ends in view, and its results are admirable. The average American college boy compares, as regards educated bodily ability, with his contemporaries in the upper classes of the gymnasium of Berlin and Frankfort, as do children who can print and one learning to write with the most accomplished pupils of drawing in your city schools.

If the School Committee of Boston shall ever really undertake to provide for the physical training of those committed to its charge, it will do well to profit by the example and experience of such enlightened States as Prussia. To do so it must bring gymnastic training for boys and girls to the front, and send military drill to the rear, or abolish it altogether.—*Boston Medical and Surgical Journal*.


THE TEETH FROM A MEDICO-LEGAL ASPECT.—The identification of dead bodies and criminals is sometimes a matter of much perplexity. For instance, the features of a dead body may be distorted or destroyed; the clothes changed or unrecognizable; and no ordinary circumstances left to make identification clear. Some such a case occurred in Michigan. A man was found in a lake murdered. As the coroner was about dismissing the case as "unidentified," the neighboring dentist had the curiosity to look into the mouth. In a moment he said: "I have a chart of that mouth in my office, and though he could not then remember the name, he soon found it by referring to his chart book. It resulted in tracing the murderer.—*Medical News*.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., }
GEO. GILLET THOMAS, M. D., " } Editors.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE MARYLAND MOVEMENT TOWARDS VITALIZING A BOARD OF EXAMINERS.

We have noted with peculiar interest, within the past few years, the agitation of the question of a Board of Medical Examiners for the State of Maryland. In his address before the Medico-Chirurgical Faculty of Maryland, the President, Dr. John R. Quinan, made a strong argument in favor of reviving the privileges and powers of the corporate law creating the Faculty, claiming that by this law a Board of Medical Examiners was duly authorized. We are glad to see this stand taken by so accurate a historian as Dr.

Quinan, as this basis affords a good opportunity for the Faculty to proceed to occupy this surrendered, but valuable, territory.

It seems to us that Baltimore can no longer fail to approve the passage of such a law ; in fact, the times seem ripe for its prompt enactment. That city is one of the most popular centres of Southern trade and education, and its patronage comes largely from States having good license laws. It is also a city having medical schools of distinctly different grades—a condition of things that the unwary student who consults only his purse finds out, but too late, when he is himself a defeated candidate before the Board of Examiners of his own State. This is a great injustice, but would find its remedy if the teaching and diploma-awarding bodies were in no way connected with each other.

Furthermore, Maryland, as we are informed, is, or will be, at no distant date, between States—Pennsylvania and Virginia—requiring a license, and therefore is fast becoming a favorite resort of quacks of all sorts, flocking there to enjoy the pursuit of gain without any legal restrictions.

We do not look upon Boards of Examiners as the cure for all the ills which beset an over-crowded profession, as all know who have studied the action of such laws that the good results are not immediately seen ; but next to good preliminary education—and in this we include all the training the boy gets from his mother's knee until the day he matriculates at a medical college—nothing promises so much future good as well organized licensing bodies independent of the colleges. This opinion, though, is becoming a settled one among the profession, and we are only sorry to note that the opposition comes more largely from the medical colleges than elsewhere, and their opposition being that of well organized corporations, it is very hard to overcome.

We look for good results from the efforts of the Maryland Faculty, and, although they may have vexatious delays, the times are ripening for ultimate success.

Prof. C. S. Sargent discovered last summer, in this State, a new station for the rare *Shortia galicifolia*, in Michaux's line of travel.

DR. LAURENCE JOHNSON.

It gives us pleasure to note that Dr. Laurence Johnson has been chosen President of the New York County Medical Society. Dr. Johnson is a general practitioner of the solid conservative sort, which one meets in New York and enjoys as the "staff of life" of the profession in that great city, where the specialist apparently eclipses every one else. As a physician, as a naturalist, as a member of the Committee of Revision of the Pharmacopœia, as a citizen of integrity, the New York County Society could not have honored one who will honor them more.

PULSE INVARIABILITY IN MENSTRUATION, REGARD- LESS OF POSTURE.

The fact that the pulse of the normal male beats from ten to fifteen strokes more per minute when the body is in a vertical position than when lying down, has long been recognized, and until a very recent period it was assumed that the same difference existed in the pulse of the female. Graves first pointed out that in cases of cardiac hypertrophy the pulse remains constant in all positions. More recently, Jorissenne discovered that in pregnancy the same constancy exists in the female, and suggested this fact as a diagnostic test of that condition. *La France Medicale* now announces that M. P. Louge, intern of the Marseilles Hospital, has discovered that in women there exists during the menstrual flow the same constancy of pulse in all positions of the body. It is exceedingly difficult to account for this phenomenon by any known physiological law. Cardiac hypertrophy cannot be invoked, and the only hypothesis that I can suggest is that there is an augmentation of the tension of the blood during menstruation—a suggestion which seems to be supported by certain clinical phenomena of the catamenial period.—*St. Louis Medical and Surgical Journal*.

SOCIETY REPORTS.

GYNÆCOLOGICAL AND OBSTETRICAL SOCIETY OF BALTIMORE.

REGULAR MEETING, HELD OCTOBER 12, 1886.

Dr. Thomas A. Ashby read a paper on

DILATATION OF THE CERVICAL CANAL FOR STENOSIS OF THE INTERNAL OS UNDER COCAINE.

It may be stated, without fear of contradiction, that the limits to the successful application of cocaine as a local anæsthetic have not yet been reached. The startling results following the introduction of this agent have been phenomenal and unprecedented in the history of medical discoveries. Scarcely had Dr. Koller made his observations before the event was spread over the entire globe, and surgeons in every country have vied with each other in successful experimentation with the newly discovered properties of the agent. Following close upon the local use of cocaine to mucous surfaces, it was demonstrated by Dr. Corning, of New York, that injections of the solutions of the drug into subcutaneous tissues, associated with circumscribed constriction of the surrounding parts, induced successful anæsthesia in the area into which the drug was injected. This discovery opened up a new field for local anæsthesia—a field which has been most diligently cultivated with results of the most astonishing character. Amputations of limbs, removal of circumscribed growths, laparotomy, circumcision and closure of hare-lip, are among the operations painlessly performed after the method inaugurated by Dr. Corning.

There is no longer a shadow of doubt as to the value of cocaine as a local anæsthetic, and its employment in surgical work is now only limited to the choice and care of the operator. All mucous surfaces are readily brought under its anæsthetic influences when solutions of sufficient strength are properly and carefully applied to the mucous membrane. The stronger the percentage of the solution, and the greater the length of time employed in its application,

the deeper its penetration, and the more profound its benumbing influences.

My experience with cocaine convinces me that it may be employed with the greatest advantage in surgical gynecology, and that many operations upon the vagina and uterus, hitherto requiring general anæsthesia, may be successfully and painlessly performed when solutions of cocaine of sufficient strength are carefully applied to the tissues. I have employed cocaine in gynecological work in a number of conditions with almost uniform satisfaction. A recent experience with this drug has induced me to relate the following case, which I think explains very satisfactorily its benumbing influence upon the cervix uteri.

Mrs. H., aged 23, married 18 months, has suffered from her first menstruation with violent dysmenorrhœa. The menstrual flow has invariably been announced with violent cramps, pains and disturbances of digestion. During three or four days of menstruation the recumbent posture has been required, and a total inability to engage in domestic duties has been almost constant.

Though married 18 months, Mrs. H. has never conceived. Physical examination revealed a small uterus, occupying a low position in the pelvis. The uterus was very acutely retroflexed. The cervical canal was bent and so small as scarcely to admit the smallest probe. There was evident stenosis at the internal os. The diagnosis of obstructive dysmenorrhœa was established, and the dilatation of the canal was proposed for its relief.

The patient was averse to taking chloroform or ether, and expressed a willingness to endure the operation of divulsion with the use of cocaine. After a few days of preliminary treatment, consisting chiefly in the use of hot water injections and attention to the stomach and bowels, the operation was undertaken. One-fourth grain of morphia was administered 15 minutes prior to placing the patient on the table, and at the same time a cone containing one grain of cocaine, with 5 grains of boracic acid, two drops of oil of wintergreen and coco-butter q. s., was introduced into the vagina. The operation was then begun. The cone had melted promptly and was removed in a liquid state. The vagina was sponged out with warm water rendered antiseptic with bichloride of mercury (1 to 4000). A small sound was passed into the uterus and the fundus lifted up. The sound withdrawn, applications of cocaine

were made at intervals of every 3 or 4 minutes to the cervical canal and to the vaginal cervix. The parts were benumbed as thoroughly as possible. The small bivalve dilator was next passed, and the canal stretched so that it would admit of the introduction of the larger blades of Ellinger's dilator. Before divulsing with Ellinger's instrument cocaine was again applied. In fact, the solution was used repeatedly during the operation. When I had succeeded in stretching the blades of the dilator to nearly their full extent the instrument broke under the strain of the pressure with a sudden snap, which startled my patient. Apart from this she experienced no pain, and expressed herself as ignorant of what was going on.

After removing the blades of the dilator I passed a No. 14 sound into the uterine cavity. Whilst the divulsion was not as complete as I desired to make it, in consequence of the breakage of the dilator, its good results were unquestionably shown. The patient was kept in bed one week. Menstruation came on on the fourth day after the operation without pain and without nausea. The first sign manifest to the patient was the appearance of the blood on her linen. The result was surprising to her, as such freedom from distress was an unknown quantity in her history. Mrs. H. is now wearing a retro-urine pessary, and is at present in comfortable health. As she has not passed through her second menstruation since the operation, I am unable to state what influence it will have upon her future health. I relate the case to show the fact that divulsion can be performed with cocaine without pain. I claim no originality for this use of the drug, but simply offer this testimony to induce my colleagues in gynaecological work to give the drug a trial, if they have not previously employed it for this purpose.

The strength of the cocaine solution used was 4 per cent.

DISCUSSION.

Dr. B. B. Browne said he had reported about two years ago two cases in which he had used cocaine in dilatation of the cervical canal. Since then it was his habit, in office practice, when slight dilatation is required, he prefers full anaesthesia, but he has used the cocaine successfully in two such cases. In two cases of acute ante flexion he injected 20 drops of a 40 per cent. solution into the uterine tissue near the point of flexion. In a few minutes he was able to pass a sound without pain, and also to apply cotton saturated with cocaine.

He thinks that by its effect on the circulation it tends decidedly to prevent the occurrence of cellulitis after local interference. He applies it to the cervical canal on cotton wrapped around a probe.

Dr. L. E. Neale said he would like to ask for information if any gentleman present had had experience with the use of cocaine by hypodermic injection. He thought the method of administration of great importance in judging the effects of the drug.

Dr. W. T. Howard said that so far as he knew Dr. W. M. Polk, of New York, was the first, about two years ago, to use the hydrochlorate of cocaine as a local anæsthetic in the operation of trachelorrhaphy. He used it in two cases. Having previously douched the vagina with warm water, the cervix, the painful cervical canal and the vaginal walls adjoining the cervix were washed with castile soap; this, in turn, was washed off, and the surface carefully dried. Then a 4 per cent. solution of cocaine was thoroughly painted, with a camel's hair-brush, over the cervix, in the canal, and over the adjacent vaginal wall. This was done three times, allowing an interval of three minutes between each application. In one case the operation lasted 40 minutes, and there was no complaint of pain till the last 10 minutes, when an uncomfortable soreness was felt. Soon after the publication of these cases Dr. Howard had operated on a number of cases of lacerated cervix, pursuing essentially the plan used by Dr. Polk, and with similar results. Dr. Howard had noticed, however, that in passing the needles through the lips of the cervix, in the usual way, with the silk loop and silver wire attached, the patients invariably complained of pain, more or less acute, in different cases. Hence, in all cases in which the laceration occurred in a large hyper-plastic cervix, demanding the removal of a certain amount of parenchymatous cervical tissue, to prevent the sutures cutting out, and thus hinder accurate union, Dr. H. much preferred that the patient should be put under the influence of ether, in order to insure a painless operation. Dr. H. doubted whether it was advisable to inject a solution of cocaine, with the hypodermic needle, into the cervical parenchyma, as the tissues are too dense, in most cases, to allow of a rapid diffusion of the anæsthetic influence of cocaine. He had seen, however, in a recent number of the *British Medical Journal*, a report of the removal of hæmorrhoids in two cases, which were rendered painless by injecting 5 drops of a 10 per cent. solution of the hydro-chlorate of cocaine. by means of a hypodermic syringe, into each side of the base of the

hæmorrhoid. After the operation a morphine suppository was inserted into the rectum, and, subsequently, not the slightest pain was experienced.

Dr. H. had now under care a married lady, aged 25 years, who suffered severely from dysmenorrhœa. She had an anteflexion of the vaginal portion of the cervix, with acute angular flexure at the posterior vaginal junction, and stenosis at the os internum. He determined to dilate the cervical canal with his dilatorium; but as the patient had grave organic trouble at both the aortic and mitral orifices, he thought that the administration even of ether was unadvisable. He therefore had applied, by means of a mop made of absorbent cotton, a 20 per cent. solution of the hydro-chlorate of cocaine, as thoroughly as possible, to the cervical canal twice, at intervals of five minutes, and keeping the cotton mop in the canal for 5 minutes each time. Then he carefully dilated the cervical canal, including the os internum, occupying 15 minutes in dilating to three-fourths of an inch. This lady had great fortitude and strength of character; and, while she did not utter a complaint, when the operation was over the shock was quite severe, and demanded a hypodermic of $\frac{1}{4}$ gr. or morphine. The pain induced by the operation was severe. The next day, in a similar case, Dr. H. operated in the same way and with the same precautions. The patient was extremely nervous, anxious and apprehensive, but had no heart trouble. She experienced little or no pain during the entire operation, although the dilatation was much greater, i. e., one and one-fourth inches. These two cases demonstrate that the amount of pain depends much upon the peculiarities of the patient; and it is well known that the normal sensibility of the female genitalia is a constantly varying factor in different persons.

Dr. B. B. Browne referred to his previous remarks in which he stated that he had injected 20 drops of a 4 per cent. solution into the uterine tissue, and there had been almost no suffering during the process of dilatation.

In one case of lacerated cervix he had painted the solution over the cervix, and had also injected it into both lips. In this case there was perfect freedom from pain, but it was impossible to say how much of this effect was due to the injected cocaine and how much to that applied upon the surface. He would recommend in cervix operations that it be used in both ways, on the surface and hypodermically.

Dr. W. P. Chunn had used cocaine once, in a bilateral laceration of

the cervix. He painted it over the cervix, then injected it into the anterior lip, and, after denuding that, injected into the posterior lip and finished the operation. The patient seemed to suffer little or no pain.

Dr. W. E. Moseley had had some experience in the use of cocaine. He had always used a 4 per cent. solution, and had always applied it by painting the surface to be operated upon freely from three to five times, at intervals of three minutes. He had done several cervix operations and found it to answer very well when there was but little cicatricial tissue to be removed from the angles. There was little or no sign of suffering while the surfaces were being denuded, in most cases when the needles were passed the patient showed signs of feeling decided pain, requiring reapplication of the cocaine. In one case of operation high up in the cervical canal the patient said she felt no pain throughout the operation, and that she would not have known when the sutures were introduced except for a remark that was made. She did feel the dragging upon the uterus when the needles were passed. Another patient said that the most suffering she had was when the shank of the scissors pinched a bit of the tissues about the vulva.

He had also, very reluctantly, and at the earnest solicitation of the patient done Dr. Emmet's new perineum operation under the same anæsthetic, but he would not be willing to do so again. Denudation was accomplished without any marked trouble, but the introduction and tightening of the sutures caused very decided suffering.

He greatly preferred full anæsthesia for either the cervix or perineum operation.

In no case had he been able to *demonstrate* that cocaine interfered with prompt union of the denuded surfaces, although he was inclined to think that it did to some slight extent.

Dr. B. B. Browne referred to a case of septicæmia, in his practice in which there was some nausea, vomiting and hiccough, in which he gave 10 drops of a 4 per cent. solution of cocaine. The symptoms were very promptly relieved, and the relief lasted for twelve hours, when he repeated the dose. He had given it also with good result in the nausea and vomiting in pregnancy.

Dr. H. P. C. Wilson said that any remarks he could make would be very much of a repetition of what had already been said, as his experience with cocaine had been much the same as that of the other gentlemen who had spoken.

He had used cocaine when operating in five cases of lacerated cervix, when the patients feared ether or chloroform. By thoroughly painting the surface with a 5 per cent. solution, and introducing it within the cervical, he could denude the parts without pain to the patient. Some of the sutures could also be passed without pain, but the deeper and last sutures are usually attended with suffering sufficient to require cessation of the operation and reapplication of the cocaine. The union of the parts after this agent was just as prompt and complete as without it.

But even when this operation could be done without pain under cocaine, if it was at all tedious, the patient was apt to become nervous and more or less restless, and move at a critical moment of cutting or passing a needle, and thus embarrass the surgeon; and hence he preferred the general and profound anæsthesia of ether or chloroform, to the local anæsthesia of cocaine.

He had never used this remedy hypodermically, but this method, in conjunction with its superficial use, would probably deaden the sensibility of the parts more completely.

He had heard of the nausea and vomiting of pregnancy being promptly checked by applying a solution of cocaine to the surface of the cervix uteri, and up the cervical canal, so as not to pass the internal os. The suggestion looked reasonable, and he would try it in the first case presented.

Dr. T. A. Ashby, in closing the discussion, remarked that there were only two or three points to which he wished to direct attention. In regard to the point raised by Dr. Howard, with reference to the different degrees of sensibility to pain in different women, he fully coincided with these views, and thought that this explanation satisfactorily accounted for the failure of cocaine to effect all cases alike. He had observed this fact, and was convinced that the anæsthetic properties of cocaine were not of equal extent and value in all cases.

In reply to the inquiry raised by Dr. Neale in regard to the hypodermic administration of cocaine, Dr. Ashby referred to the valuable experiments and observations of Corning, of New York, who was the first worker in this field to demonstrate the great value of cocaine injected subcutaneously. Dr. Corning has shown that where the tissues are constricted in such a manner as to prevent rapid absorption of the injected solution, profound local anæsthesia is the result. The literature of medicine is now filled with the recital of cases show-

ing the wide application of this method and its great value. The removal of necrosed bone, amputation of limbs, laparotomy, circumcision, closure of hare-lip, and similar procedures have been painlessly performed under cocaine injections, employed after the method inaugurated by Dr. Corning. Dr. Ashby thought that a practical difficulty would be met with in injecting cocaine into the cervix uteri and perineum on account of the inability of the operator to prevent rapid absorption of the solution, owing to the fact that the cervix uteri and perineal tissues could be constricted only with the greatest difficulty in a few exceptional cases. He believed that Dr. Corning's method was less applicable in female surgery than in surgical procedures elsewhere.

Dr. L. E. Neale thought the ecraseur carrying a catgut loop, shown by Dr. Erich at a previous meeting of the Society, would answer the purpose of constricting the cervix very well. After drawing the uterus down in the vagina, he saw no difficulty whatever in throwing the loop around and constricting the cervix at any desired height, the higher above the vaginal junction, of course, the more vaginal tissue included in the constriction. It was not at all necessary for the use of this instrument to have an elongated cervix.

Dr. B. B. Browne thought that when constriction was used together with application of cocaine, we must credit the constriction with a very considerable anæsthetic effect, and he believed the more thorough anæsthesia was due to this rather than any checking of the absorption of the cocaine into general circulation. He referred to a case in which a friend had operated for phymosis, the only anæsthesia used being constriction of the penis. In this case the patient suffered no pain.

SOLUBILITY OF MORPHINE IN LIME-WATER.—Doubtless many doctors who have given sulphate of morphine in solution in lime-water have not settled in their minds the chemical compatibility of the mixture. Some recent experiments in the assay of morphine by Wrampelmeiner & Meexert (*American Druggist*, November), show the mutual solubility of lime-water and morphine.

CORRESPONDENCE.

CASES OF TRIPLETS REACHING NINETEEN YEARS IN ONE SET AND TWO YEARS IN ANOTHER.

Messrs. Editors North Carolina Medical Journal:

In the NORTH CAROLINA MEDICAL JOURNAL for August, you publish Dr. Crump's paper on "Multiple Fœtation—Triplets," read before the North Carolina Medical Society, at New Bern, in which he reports a case, and in commenting on it says:

"I have been unable to find a single authentic case of triplets in which all of the children lived, and but one in which any of the children lived more than a few weeks."

Thinking it might, in connection with Dr. Crump's paper, interest the readers of the JOURNAL, as well as furnish Dr. C. some statistical matter, I beg leave to report the following cases:

Case 1.—P. McE., colored, in 1867 gave birth to triplets—all females. All three survived, and are now well-developed women. Two of them have given birth to one child each. The parents were 25–30 years old—both colored ("ginger-cake") and of ordinary size and vigor.

Case 2.—H. McL., colored, on July 17, 1882, gave birth to triplets—two males and one female. All survived and were well-developed—grew fast until March, 1884. (The mother was confined at this time and the children were neglected.) One male died of some acute disease, presumably the effects of exposure. The others still survive—strong, vigorous children.

I might add, in this connection, that this woman, on March 17, 1884, gave birth to twins—male and female. Again, on December 5, 1885, she gave birth to one—a male. As in Case 1, both parents are colored. Age when triplets were born—mother, 36; father, 45 or 50.

Taking into consideration the bad hygienic condition the average negro child of our State exists in—bad and insufficient food and clothing—these cases, which are no exception to the rule, suggest the idea that the vitality of triplets is not so low as Dr. C's paper would lead us to believe. It is true, he quotes "the books," and it may be that these two cases are only a coincidence, although they did happen in the same community.

Simpson mentions a case of quadruplets, in which all survived—one female and three males. The female subsequently gave birth to triplets.

Yours truly,
Gibson's Station, N. C.

N. M. McLEAN,

NOTES.

INTER-STATE NOTIFICATION IN INFECTIOUS AND CONTAGIOUS DISEASES.—The following resolutions, presented by the National Conference of State Boards of Health, were adopted by the American Public Health Association, at Toronto, October 8, 1886 :

WHEREAS, It is necessary for the protection and preservation of the public health that prompt information should be given of the existence of cholera, yellow fever and small-pox ; be it

1. *Resolved*, That it is the sense of the National Conference of the Boards of Health that it is the duty of each State, provincial and local board of health in any locality in which said diseases may at any time occur, to furnish immediately information of the existence of such disease to boards of health of neighboring and provincial States, and to the local board in such States as have no State board.

2. *Resolved*, That, upon rumor or report of the existence of pestilential disease, and positive definite information thereon not being obtainable from the proper health authorities, this Conference recommends that the health officials of one State shall be privileged and justified to go into another State for the purpose of investigating and establishing the truth or falsity of such reports.

3. *Resolved*, That, whenever practicable, the investigations made under the preceding section, shall be done with the coöperation of the State or local health authorities.

4. *Resolved*, That, any case which presents symptoms seriously suspicious of one of the aforementioned diseases, shall be treated as suspicious, and reported as provided for in cases announced as actual.

5. *Resolved*, That, in any case respecting which reputable and experienced physicians disagree as to whether the disease is or is not pestilential, it shall be reported as suspicious.

6. *Resolved*, That, any case respecting which efforts are made to conceal its existence, full history and true nature, shall be deemed suspicious and so acted upon.

7. *Resolved*, That, in accordance with the provisions of the foregoing resolutions, the boards of health of the United States and Canada, represented at this Conference, do pledge themselves to an interchange of information as herein provided.

IRVING A. WATSON,
Secretary American Public Health Association.

To HEGAR, of Freiburg, we are indebted for the new sign of great promise which bears his name. To Hegar's sign of pregnancy I had expected to devote the greater part of this paper. Owing, however, to the writings of Reini, Compes and Grandin, which have been so largely quoted by the American medical journals during the last two or three months, I fear I shall be speaking

of something not new, but quite familiar to all. This sign consists of an unusual resilience, compressibility, softness, boggy, yielding and thinning of the lower uterine segment; that is, the section immediately above the insertion of the ligamenta sacro-uterina. This condition is not alone present when the remainder of the body, as is often the case, is firm and hard, but also prominent when this is soft and elastic. The shape assumed is fan-like, or that of a balloon, more than the usual pear-shape. It has also been termed an old-fashioned fat-bellied jug. This enlargement is especially marked antero-posteriorly. The change is most apparent at the middle portion of the lower segment and in the median line, the sides of the organ being much firmer and more resisting.

Compes makes the examination as follows: The thumb is introduced into the vagina until it reaches the cervix, and the index-finger into the rectum until it reaches beyond the ligamento sacro-uterina; the other hand is placed over the abdomen immediately over the symphysis and pressed down towards the finger in the rectum. The rectal finger explores the cervix and the lower uterine segment in all its parts, and lastly, the higher parts of the uterus. The examination is facilitated by pulling down the uterus with a volsella and evacuating the bladder and rectum. While this is undoubtedly a very thorough mode of examination, it is repulsive both to the patient and physician, as well as a difficult and hazardous procedure. It is certainly possible in a great majority of cases to make out all that is necessary with a finger in one of the cul-de-sac and the other hand externally. In urgent cases, where this does not satisfy the physician, it would be quite proper to make the examination as above described.

Compes has examined a number of women, found the sign present, then put them under an anæsthetic, and still found it present. He says the softened and enlarged uterine segment above the cervix has often been mistaken for a tumor, and that, in fact, laparotomy has been performed under this delusion.

There are two states which may simulate this condition, viz: distended bladder and the uterus distended with menstrual blood. A distended bladder can and should be evacuated. An imperforate hymen or vagina, or the history of the case, would soon dispel the other question. Hyperplasia would show increased density. Subinvolution increases the longitudinal as well as the transverse diameter. The obstructed circulation from an anteflexed uterus does not impart that feeling of resiliency and compressibility. In marked retroversion it is more difficult to palpate the corpus uteri, and the sign may fail. Here also it is proper to examine per rectum.

Dr. Reinl, formerly assistant to Hegar, has reported six cases; by letter he tells of extended experience as follows: "Among twenty-two cases I missed this sign but twice, and found it earliest in the fifth week of pregnancy."

Dr. Compes, present assistant to Hegar, reports eight cases.

Dr. E. H. Grandin, of New York, has reported twelve cases. In

a letter to me since this report, he says: "Since the writing of my paper I have had six additional cases, all corroborated, and one of these a case of retroversion. * * * Personally, therefore, I record myself as being able to make the diagnosis prior to the eighth week by Hegar's sign alone."

My experience has been so recent that many of the cases have not had time to prove themselves. I will mention but two, one in which the sign was absent, one in which it was present.

Case 1.—Mrs. B., a widow, aged 37, came to me March 20, 1886. She acknowledged the opportunity and feared herself pregnant, not having seen her menses for twelve weeks. I examined her for Hegar's sign, but failed to find it. I told her I did not think she was pregnant. Gave her tr. ferri chloridi, and asked her to return in a few days. She returned three times, each time expressing great fears of pregnancy. Each time I examined her, failed to find Hegar's sign, assured her she was not pregnant, and continued the iron. April 1st the menses reappeared, and were normal in amount and duration.

Case 2.—Mrs. R., a young married woman, aged 20, a delicate blonde, the mother of one child aged 2 years. She had been absent from her husband four months visiting her parents at Washington, D. C. She last had her menses January 15, continuing five days, normal in amount and conduct. She returned to Cincinnati and her husband February 9. March 5, Dr. Ransohoff was called, and finding the case to be gynecological, referred her to me. She had not had a return of her menses since the middle of January. The nature of her case required a digital and specular examination once, twice or thrice weekly. March 10 she was slightly sick at the stomach. This had not occurred before, and did not occur, nor any other sign indicating pregnancy, besides the cessation of the menses, before the sixth week after her return to her husband. During the sixth week I made three careful vaginal examinations, and at each one was sure I found Hegar's sign present. I assured the patient that I was quite confirmed in the belief that I had frequently expressed to her, viz: that she was pregnant. On March 30 she complained of not feeling well. On the morning of March 31, the forty-eighth day after her return, she passed a large quantity of blood and a membrane, which she saved and showed me. This proved to be the major portion of an ovum, the remainder of which was found within the vagina.

Dr. Palmer, of Cincinnati, informs me that he regards Hegar's sign as possessing the greatest value in diagnosing early pregnancy, especially taken in conjunction with the change of position, at first sagging, then increasing anteversion at the end of the second and during the third month, both incident, of course, of the pregnancy.

As the shape of the uterus, enlarged by pregnancy, is one peculiar to that state, and is an enlargement, largely confined to the body of the organ, it can thus be differentiated from the enlarge-

ments due to sub-involution, chronic metritis with hyperplasia or hypertrophy, or fibroid infiltration. The enlarged uterine body from pregnancy is likewise less dense than from hyperplasia or an intra-mural fibroid, and, to touch, presents a much greater degree of uterine pulsation.

In all these named morbid conditions almost surely there will be a menorrhagia in some form, or a metrorrhagia, or both. It is extremely rare for a fibroid infiltration to involve both anterior or posterior walls alike; the enlargement is symmetrical.

The peculiar enlargement of the uterus described by Hegar, but noticed often by many before his description appeared, is best detected in the normal anteverted position of the uterus. Retroversion prior to pregnancy, as malposition is usually increased by pregnancy in the first month, presents conditions rendering it more difficult of recognition.

There remains to us, then, to again lament our inability, in many cases, to make a positive diagnosis of early pregnancy, to mourn the fallibility of the old and many of the new symptoms, to especially recommend the sign of Hegar, which until now has proven itself impregnable, and to plead for investigators in a field which should not be "barren or unfruitful."—*Journal of the American Medical Association.*

READING NOTICES.

SUBSTITUTION.—Does the profession realize how much injury is done to the physicians and their patients by *the substitution of spurious, or the so-called "just as good" preparations in place of goods of standard reputation?*

The following letter from Dr. Springer is a case in point:

Respectfully,

BATTLE & Co., Chemist's Corporation.

VAN BUREN, OHIO, September 10, 1886.

Messrs. Battle & Co., St. Louis, Mo.:—GENTLEMEN:—In the case of "Insomnia," which I reported to you in May last, and wherein it required seven-drachm doses (hourly 1 drachm) to produce sleep by Bromidia bought at pharmacy in Findlay—it required but 1 drachm, repeated in *one* hour, to produce a good night's rest, of the sample bottle you sent me. I also use the Bromidia (Battle & Co.) with the best results in "cholera-infantum" and in "hysteria." *Am satisfied that the article bought at Findlay was "Spurious."*

GEO. SPRINGER, M.D.

—:O:—

COEGENITAL HEREDITARY ATONIC DYSPEPSIA.—During a practice of twenty years, I have prescribed Lactopeptine to patients of

all ages, and have never been disappointed in its action when indicated. But I desire to speak in particular of its action in a case of congenital hereditary atonic dyspepsia: in an infant, to whom I began to administer this remedy on the third day after birth. Mrs. H. L. S., Langside, Miss., was delivered of a male child in whom there was manifested well-marked symptoms of atonic dyspepsia. The mother had been a victim of dyspepsia from girlhood, and had inherited the malady from her mother. The infant was put to the breast a few hours after birth, and nursed readily; but almost immediately rejected the milk. Repeated trials all resulted in vomiting, followed by exhaustion. Other articles of food were tried, including cow's milk, etc., without improvement. The child was in great danger of starvation. On the third day I began the administration of Lactopeptine. The effect was immediate and almost miraculous. I ordered one-sixteenth of the adult dose to be dissolved in about two ounces of breast milk (drawn from a robust, healthy wet-nurse), and administered every two and a half hours. There was no more rejection of milk—except the usual vomiting of curdled milk, to relieve the crowded state of the stomach, which occurred after the first ten days. Condensed milk, cow's milk (properly diluted and sweetened), Mellin's food, boiled bread (pap) were substituted for breast-milk, but always with Lactopeptine. A steady improvement was manifest from the beginning, and kept up during the first dentition, which process was gone through with in a most satisfactory manner. No untoward diarrhœa or intestinal disturbance characterized this period, and at ten months, the child was virtually cured of its dyspepsia, and could eat and digest ordinary food such as children of that age may do in good health. The parent's of the child believe firmly (as I do) that Lactopeptine saved their infant. In cholera-infantum, in diarrhœa, and in all of the disturbances of the alimentary canal, during dentition and early infant life, I find Lactopeptine an ever-effective and reliable remedy. In adult dyspepsia, all are now familiar with its beneficial effects; but I should be glad if the profession would be induced to try it in the vomitings, diarrhœas and dyspepsias of infancy. I recall several babies whose lives I believe I could have saved had I known, ten years ago, what I do now of the ready adaptability of Lactopeptine to infants ailments.—R. WALKER BEERS, M.D., in *the Medical Brief*.

Angola, La.





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ORIGINAL COMMUNICATIONS.

PORTER'S ANTERIOR EXTENSION SPLINT—A MODIFICATION OF SMITH'S ANTERIOR SPLINT.

By B. M. CROMWELL, M.D., Eckhart Mines, Md.

This modification of the well-known "Anterior Splint" of Prof. N. R. Smith, of Baltimore, which accomplishes all that the Smith splint is capable of, possesses this additional great advantage, that by it powerful extension can be obtained at a minimum of discomfort to the patient. It was introduced to the profession by Dr. G. E. Porter, of Lonaconing, Md., in the year 1876, through the columns of the *Medical and Surgical Reporter*, of Philadelphia. It has been before the profession now ten years, and, judging from the very cursory notice given it in "Hamilton on Fractures and Dislocations," and in such other medical literature that has come to my notice, I am convinced that this valuable appliance for the treatment of fractures of the lower extremity, is either generally unknown or is but illy understood; otherwise it would certainly be in more general use. The propriety of calling more special atten-

tion to Porter's splint suggested itself to me, because, judging from my own experience, I am disposed to think that those surgeons to whose notice this modification has been brought, have, after a hasty and insufficient examination of it, cast it aside as a mere fanciful variation of the Smith splint, from which no material advantage was to be obtained. For several years after the splint was brought to my notice, I continued to put up fractures of the thigh and leg by the methods in vogue, because I did not take the trouble to understand the principle involved in the application of this one. Not until I was induced to apply it under the supervision of one long conversant with it, did I find how valuable the appliance was. Its use has superseded in my practice, as it has in the practice of all those who thoroughly understand it, all other methods for treating fractures of the thigh; and if the fracture is oblique or compound or attended with contusion and crushing of the soft parts of the leg also.

Believing that any hastily formed opinion as to its merits is likely to be erroneous, and that by it medical men are denying themselves the use of the most perfect and satisfactory apparatus for the treatment of fractures of the thigh that has yet been devised, I have been careful, in writing this article, to spare no details that are requisite to make its *modus operandi* easily understood and its merits appreciated. Accompanying the article is an illustration of the splint doing duty *in situ*. It is taken from a photograph kindly furnished me by Dr. Porter from a patient of his that was under treatment for fractured thigh, and which he was kind enough to invite me to see with him. A study of the illustration will make clear any statement in the article that may be obscure. To avoid frequent references to the description of Smith's splint, and to make the description of Porter's as explicit as possible, I will describe the mode of constructing, as well as applying the splint, with such suggestions as seem requisite to insure success. In doing so I shall draw freely from Dr. Porter's description on introducing his splint to the profession, without any more explicit acknowledgment.

It was claimed by Prof. N. R. Smith for his splint that, by attaching the suspending cord to the ceiling at a point below the seat of fracture, extension through it could be obtained. This is undoubtedly an error, for if the splint is not secured to the pelvis

by a band, the effect of such obliquity of the cord will be to pull the splint and dressing off of the leg altogether, and if the splint is secured to the pelvis the traction of the cord is exerted against the pelvis, and not against the leg below the seat of fracture. This claim of Prof. Smith is now, I believe, universally disallowed, but that extension cannot be made with his splint in this or any other way, is easy of demonstration to any one who will try it.

Dr. Porter's modification consists in this: the Smith anterior splint is unchanged and unmodified in its entirety, *except* that the side-wires are not united at the instep, but are prolonged and arched over the foot; they are then brought down parallel with the plantar surface of the foot, and extending an inch or more below the heel, are united as in the splint of Smith. (This can be seen and understood by a glance at the illustration.) To the descending arms of this pedal arch are attached adhesive strips (one to each arm), previously applied to the outer and inner aspects of the leg, beginning at the seat of fracture; extension is made by the spring of the wire-arch, made effective by obliquing the suspending cord, as will be more fully explained farther on.

The splint is made of stout No. 5 wire of the shops, for adults; for children, smaller sizes are more suitable. From its pelvic extremity to the bend at the instep (the beginning of the arch), the side-wires are two inches apart; from this point they gradually widen as they arch over the toes and descend parallel with the plantar surface, until at their termination, where they are joined together, they are five inches apart. The side-wires are united at intervals of six inches by smaller cross-wires, which are slightly curved upwards and twisted on themselves, so as to form eyelets for the insertion of the hooks of the suspending cords. The splint is bent at the groin to adjust it to the abdomen of the patient, and very slightly at the instep; but the arch should spring from the instep, abruptly. (See illustration.) The splint should also be slightly bent at the knee to accommodate the patella, and to add strength to its centre, but *not* to give a semi-flexed position to the leg, which should be kept straight. The splint should be of sufficient length to reach to the anterior superior spine of the ilium, and the descending arms of the arch should reach a little below the heel of the patient to accommodate the adhesive strips. The arch should be symmetrical, and the side-wires forming it should be five

inches apart at the top of the arch and five inches at the heel, so that from the top of the arch they will descend parallel to each other, as well as parallel to the plantar surface of the foot.

The apparatus for suspension is the same as that used by Prof. Smith, except that Dr. Porter uses two leg-cords, one long and one short, which gives better support to the limb.

Instead of the roller, Dr. Porter uses "*the many-tailed bandage*" in two pieces, one piece long enough to reach from the knee to a little beyond the plantar border of the heel; the other from the knee to the perineum. The tails, two and a half inches wide, should be well cut down, leaving a narrow isthmus along the posterior median line of the limb, and long enough to embrace the limb and pin over the side-wires, with three or four inches to spare. *These many-tailed pieces must always be made of stout unstretching drilling.* This is an essential point. I have tested it repeatedly."

The adhesive strips for an adult should be not less than three inches wide, and should be applied to the outer and inner aspects of the limb—the hair being first shaved off—beginning at the seat of fracture and extending beyond the foot far enough to lap over the descending side-wires of the arch. The strips should be secured to the limb from the maleoli upwards, by a well-adjusted roller bandage.

The pulley must be secured into a joist in the ceiling at a point that will admit of free motion of the bed, and at a point *below* the seat of fracture. A hand-rest should also be securely attached above the patient's head, at arm's-length above him, by means of which he can shift his position at will.

Applying the Splint.—The broken limb, after proper adjustment, is placed upon pillows, on which the many-tailed pieces have been arranged. The limb being elevated its whole length, one pillow is placed under the thigh and the other under the leg, so that the many-tailed strips will come together at the flexure of the knee. The splint is held by an assistant over the anterior aspect of the limb, the arch being over the foot and the other end over the groin. "From the knee upwards the splint should be not less than two inches above the limb. The adhesive strips are pinned over the plantar side-wires in a line with the axis of the limb. Several tails of the bandage, at suitable supporting points, should be pinned over the side-wires. One short cord is hooked into the cross-wires at the groin and ankle, the other to the cross-wires above and below the knee;" these short cords

having been previously passed through a ring attached to the end of the elevating cord. The elevating cord is then drawn upon until the limb is clear of the pillows, which are then removed, and the other tails of the bandage are adjusted to the limb and pinned to the side-wires. "If this duty is well performed the bandage applies itself to the general contour of the broken member with a neatness and snugness simply perfect. A doubled strip of muslin must be passed round the pelvis and pinned over the side-wires above the bend at the groin. By pushing the bed head-ways we get the requisite extension. To prevent the patient slipping down in bed, its foot should be elevated from three to six inches."

The tails supporting the seat of fracture must be firmly drawn up ; by doing so we raise the fragments into place and restore the normal curve of the bone. If proper attention is given to this point the limb should never unite with a "backward curvature or angle." * * * "When the many-tailed bandage is employed in place of the roller the occurrence of this deformity should probably be attributed to the surgeon rather than to the apparatus." In fractures at or within the upper third of the femur there is a strong tendency of the muscles of the gluteal region to pull the upper short fragment outwards and somewhat downwards, owing to the fact that the powerful glutei muscles are not antagonized by those inserted below the seat of fracture. The tendency to deformity arising from this is difficult to counteract in the treatment of thigh fractures by weights suspended from the foot, and the patient is apt to recover with a decided "bow" to thigh. This can be obviated by the splint under consideration by diverting the limb, after it is swung up, outwards, so that the glutei muscles are relaxed. I doubt if this tendency can be completely overcome, as Dr. Porter says, by "drawing up the tails of the bandage" at the seat of fracture ; but by relaxing the glutei in conjunction with this precaution no difficulty ought to be experienced.

The Bed.—Before concluding this description of the apparatus and the conditions essential to the successful treatment of fractures by this splint, a word about the bed on which the patient is placed is necessary. Dr. Porter very truthfully says: "If we attempt to treat a fracture of the thigh with this or any other apparatus without a suitable bed, both patient and surgeon stand a fair chance of coming to grief." The bedstead should be not less than three feet six inches wide, that the patient may have some latitude of movement with his

hands and arms ; it should have a solid bottom, to prevent the mattress falling into ridges ; it should be without a foot-board, and the mattress should stand higher than the frame. It should be strongly put together with nails or screws, to prevent the possibility of its coming apart, and it should be without rollers.

It is not claimed that this splint produces extension when the leg is at rest on the bed, or if it is suspended vertically. In such a case the action of the adhesive strips on the wire-arch would be to push the splint up on the abdomen of the patient. It is of the utmost importance that this should be well understood, for upon a correct appreciation of the principle involved depends the successful application of the splint. With the leg at rest or suspended vertically, the splint can exert no extending force upon the lower fragment of the fracture, unless a counter-extension perineal band is passed round the limb at the groin and fastened to the cross-wire at the groin on either side. But if the cord is suspended *below the seat of fracture*, the traction necessary to elevate the limb *pulls the splint downwards against the adhesive strips*, which in their turn *pull the lower fragment of the fracture from the upper*, counter-extension being supplied by the weight of the body—and so extension is made. The amount of extension obtained depends upon, first, the strength of the arch spring ; second, the degree of obliquity given to the cord ; and third, to the weight of the counter-extending mass—the body.

To sum up the advantages obtained by the use of this splint in the treatment of suitable fractures, I will point out that the splint is simple and easily constructed. It may be made by the surgeon himself at any tin-shop. It is durable, and does not readily get out of order ; is of easy and quick application, and affords more ease and comfort to the patient, as well as more freedom of movement than any other contrivance. It facilitates the use of the bed-pan, and the arch over the foot takes the weight of the bed-clothes from the foot. All bandaging is dispensed with, which is a matter of very great importance when it is desirable to inspect frequently the condition of the soft parts surrounding a fracture. Even the roller that is applied over the adhesive strips may be dispensed with if occasion requires, and the limb becomes open to inspection at all points, by simply unpinning one or more of the strips that make up the many-tailed bandage.

As regards results obtained from the use of this splint, Dr. Porter's

experience ought to be conclusive. In his article in the *Medical and Surgical Reporter*, bringing the splint before the profession, he gives the histories and results in six cases treated by himself during the years 1874-'75. In three of these cases he obtained no shortening—in two, one-half inch, and in one, one-fourth of an inch.

Quite recently I have received from him the histories of six other cases of more recent date. Two of these were caused by muscular spasms in epileptics—fracturing the thigh. To one of these he applied the splint, adopting special precautions to protect the limb on a recurrence of the seizures, of which she had twenty-seven (27) during treatment. He reports the case as recovering "without deformity," but says nothing of shortening. The other epileptic's fractured thigh was put up in starch bandages, but the result was not so good, as she is reported as recovering with her thigh a "good deal curved." *Case third*—one of multiple fracture, involving two fractures of the shaft of the left femur, one of the left tibia and fibula near the ankle, also fracture of the right tibia extending into the ankle-joint, and of the fibula four inches above the malleolus. These several fractures were attended with two lacerated wounds, one of six and one of two inches in length, in the ham. The "Anterior Extension Splint" was applied to both legs; was on his crutches at the end of ten weeks with one-half inch shortening. *Case fourth*—fracture of right femur in its middle, with compound comminuted fracture of left foot—foot being twisted outwards. Was suspended in the "Anterior Suspension Splint"; was on his crutches in seven weeks with no bad results as to foot. No shortening when measured at the end of seven weeks. *Case fifth*—multiple compound comminuted fracture of right femur; one fracture close below the trochanter, another (oblique) about two or three inches above the condyles, with some comminution of the shaft between the two fractures, and a sharp point of bone piercing the skin. Was put up in the "Anterior Extension Splint," which was kept on forty-seven days; was required to keep his bed two weeks longer. Patient always claimed that the broken limb was the longest; on measurement at the end of three months the limbs were found to be of the same length. *Case sixth*—multiple fracture; left femur fractured at junction of upper and middle and at junction of lower and middle thirds; tibia and fibula of same limb fractured at lower end, involving ankle-joint; right tibia fractured at upper end, and internal lateral ligament torn across. Both limbs put up in the

"Anterior Extension Splint." Right leg taken out of splint at the end of seven weeks, the left at the end of nine weeks. Shortening of left leg three-fourths of an inch. *Case seventh*—multiple fracture of right femur and fracture of pubic bone on same side. "Anterior Extension Splint." Shortening five-eighths of an inch.

It will be seen that all of these cases were of unusual interest, either from the nature and extent of the injuries involved, or, as in the two cases caused by muscular spasm in epileptics, the curious way the injuries were brought about. The results obtained in each case speak well for the efficiency of the apparatus, and bespeak for the "Anterior Extension Splint" of Dr. Porter's ingenious contriving, more general recognition by the profession than it has yet received.

SYMINGTON (Dr. J.)—"The mastoid portion of the temporal bone."—*Edinburgh Medical Journal*, October, 1886.—The writer of this article draws attention to the anatomy of the mastoid with reference to the operative treatment of inflammations of its interior. The mastoid is not one of the original elements, the fusion of which forms the adult temporal bone. In the infant the mastoid contains a single air cell communicating by a large opening with the attic of the tympanum. This antrum mastoideum has a thin roof separating it from the cranial cavity, but approaches nearer the outer surface of the skull than does the tympanum. It is not mentioned by English writers on anatomy, although of much importance to aural surgeons. Dr. Symington concludes, from the examination of infants and of children between four and twelve years of age, that the air cavity is of much the same size in each. Should suppuration occur, the chances of pus escaping externally would be greater in infants than in children, as the external layer of the mastoid thickens with age. In adults, the amount of air space and of mucous surface is greater than in children, and the risks of inflammation attacking the lateral sinuses are increased in consequence of the layer of bone between the anterior and lateral sinuses becoming converted into air-cells. It is at puberty that the air spaces of the mastoid are developed by the absorption of the fine cancellous tissue.—*Medical Chronicle*.

SELECTED PAPERS.

SOME DISORDERS OF ADOLESCENCE, ESPECIALLY IN GIRLS.

By JOHN M. KEATING, M.D., of Philadelphia.

There is a large amount of literature on this subject, but it is mostly confined to monographs or articles appearing in popular magazines. These do undoubtedly a great deal of good, but at the same time it seems to me that there is a medical side of the question which is equally important.

We all recognize the very great importance of impressing upon mothers the value of all that tends toward muscular development in growing girls. They should be symmetrically developed, should have full chests, straight backs and strong limbs. We should also urge the importance of clothing of light weight and loose fitting, the principal strain being on the shoulders, not on the waist and hips, and also the evil results of cramped, stooped positions in the school-room, eye strain and bad ventilation. We all urge these matters daily, and we all know but little attention is paid to them. But there are certain forms of various disorders which occur about the time of the second dentition, which deserve more than a passing notice. These are manifested either as a chorea, nervous excitement, such as night terrors and various mental disturbances misnamed hysteria, gastro-intestinal disorders and evidences of mal-nutrition. The child will probably become languid, suffer with frontal headache, become peculiar in her disposition and show fits of temper, shun society of other children, lose her appetite, become despondent, and possibly develop a local twitching of some of the facial muscles. It is customary to say that this is all reflex, is possibly the warning that the system is undergoing some change preparatory to the menstrual functions—that it is in fact a true hysteria. This may or may not be the case. My own impression is that it is often due to the anæmia brought about by rapid growth and development, with faulty assimilation and deficient oxygenation. In my experience such cases present two types, the one essentially nervous, just described, the other the so-called strumous or lymphatic, in whom the want of proper assimilation is shown by a large amount of stored fat, and the anæmia by excessive pallor.

In the first case, the mother will tell you at once that her child cannot take iron, that she has frequent nose-bleeds, and that she feels confident that if iron could be given it would be of great service. The nervous system seems to run riot, but this very excitement in itself is an evidence of the demand on the part of nature for a blood supply which is nutritious and well oxygenated. All the exercise in the world, all the most nutritious and sustaining of foods, will have no effect until the digestive organs are made to perform their normal functions. If you examine the tongue you will find it coated, the breath is heavy, the bowels are sluggish, the appetite is perverted, the child craves extraordinary articles of food, especially acids and sweets. She has a disgust for her regular meals. There is flatulence, cardiac palpitations, asthma after exertion. The urine is either scanty and high-colored, or very copious and of low specific gravity. If the menses have been established they are scanty, colorless and irregular, or there is a leucorrhœa. In these cases the recommendation of popular writers for gymnastics, friction, mild diet, etc., are admirable after the digestive organs have been cleared of their accumulation of ashes, and the normal functions whipped into activity. For an infant I have the greatest confidence in small doses of calomel, with soda bicarb. and ipecac, frequently repeated; but for the cases we now speak of, I prefer much the following:

R. Acid nitro-muriat. dil.,	℥ xl.
Succus. Tarax.,	℥ lxxx.
Vin. pepsini,	q. s. ad. ̄ j.

Sig.—Teaspoonful in water after meals three times daily, with a half teaspoonful of the fluid extract cascara sagrada every night until the bowels become regular.

After taking these for a few days, if the tongue has become clean, the complexion clearer, the patient can be placed on the following, instead:

R. Hydrarg. chl. corros.,	gr. $\frac{1}{8}$.
Liq. arsenici chlor.,	℥ xij.
Tinct. ferri chlor.,	3 j.
Syr. limonis,	3 j.
Aquæ,	q. s. ad. ̄ ̄ vj.

Sig.—Tablespoonful after meals, and the laxative continued, if necessary, at night.

As far as the general treatment is concerned, the little patient should be sponged every morning with tepid water, she should stand in a tub, and have a pitcher of it poured down her spine from the nape of her neck, and then be thoroughly rubbed with a soft Turkish towel into a glow. The breakfast should consist of milk (warm), or cocoa, a soft-boiled egg, or rare pieces of steak or chop, either oatmeal, cracked wheat, grits, or Indian meal, alternating; bread and butter, with hot cakes. For dinner, soup, rare meat, fresh vegetables, very little water. For supper, stewed fruits, bread and butter, warm milk or cocoa, with tea, not coffee. She should retire early, and not be permitted to read at night. The supply of oxygen should come from out-door exercise, not an over-indulgence in walks or games that fatigue; let the school hours be limited to the early part of the day, and avoid that abomination of preparing lessons in the afternoon or evening for next day's recitations.

In about a week's time the girl will be able to bear the iron alone, and the tincture of the chloride can be given in ten or fifteen drop doses for sometime, or a chalybeate water can be given with arsenic. The digestive organs will now also tolerate milk in large quantities, provided it is of medium richness, is fresh, and is given warm.

But this is not all. There are very many cases of a highly nervous type, which, despite the most careful treatment, will not improve at home. The constant association with parents of like temperament, however solicitous they may be in carrying out instructions, is of itself a cause of nervous irritation.

It may be necessary to send such children from home, either to some relative, living possibly in the country or some distant city, or perhaps to some suburban or country boarding-school, where a thorough change of air and scene, the association with girls of a different temperament, will work wonders.

For the strumous type the same preparatory treatment may be instituted, and for such I would not hesitate to push the iron, phosphates, cod-liver oil as soon as possible. Change of air to the seashore is advisable. There is little trouble in the home treatment on these latter cases; there is rarely a conflict of authority in such families.

Although I have intimated that the ovaries have little to do with the production of these conditions, I feel satisfied that the weak-

ness, constipation, faulty clothing, eye strain, or dental pressure, will eventually tend to the production of uterine derangements—anaemia being the cause, due to deficient assimilation, from digestive disturbances, want of fresh air and healthful exercise, reflex irritation, and afterwards uterine disorders follow—*post hoc* instead of *propter hoc*.—*Medical and Surgical Reporter*.

SOME POINTS IN BRAIN SURGERY.

At the recent annual meeting of the British Medical Association Mr. Victor Horsley read a very interesting and practical paper on "Brain Surgery," in which he handled the subject by describing in detail the treatment of an imaginary case, and illustrated his remarks by photographs and specimens from patients exhibited, and from lower animals which had been made the subjects of experiments. Even in the best courses on operative surgery but little or nothing is done in the way of making the student familiar with operations on the brain, and it will therefore be of interest to follow closely, in this place, the matter of Mr. Horsley's paper.

On the day before the operation the head of the patient is shaved and washed with soft soap, and then ether; after which the position of the lesion is ascertained by careful measurement, and the place marked on the scalp. After this the head is covered with lint, soaked in a 1 to 20 solution of carbolic acid, oil-silk and cotton-wool; by which it is thoroughly carbolized for at least twelve hours before the operation. The usual purgative is then administered, on the evening previous to, and an anema on the morning of, the operation. In anæsthetizing the patient Mr. Horsley advises the use of a quarter of a grain of morphia, hypodermatically, and then chloroform. (It should be remembered that chloroform is more used in England than in this country.) The morphia allows a prolonged operation with a smaller quantity of the anæsthetic; and, as ascertained by Prof. Schäfer and Mr. Horsley, it causes well-marked contraction of the arterioles of the central nervous system; so that an incision into the brain is accompanied by comparatively little oozing if the patient be under its influence. The author

remarks that he has not used ether because he feared cerebral excitement from its use, while chloroform causes cerebral depression; but he states that in case of heart complications ether would be used. He thinks that in case of considerable heart trouble cocaine might be used as the anæsthetic; and if so, a very strong solution should be used when the dura mater is reached, as this membrane is very sensitive. As asepsis is the one cardinal point on which success of brain surgery depends, any solution applied to the dura must of course be thoroughly aseptic. Mr. Horsley thinks that in treating the wound the strictest Listerian precautions should be used; the spray, 1 to 20 carbolic solution, and for the first few days at least dressings of carbolic gauze. Sublimated gauze, the skin being protected by carbolic gauze, may be more serviceable; but good carbolic gauze is elastic enough.

He condemns the usually advised cruciform incision as inconvenient, for it is necessary to hold back four flaps; a semilunar flap simply has to be thrown back, and is not again in the way. It is important: 1. To carry the incision vertically to the bone and to raise with the flaps all parts superficial to the periosteum. 2. To make a shallow curve, so as to avoid cutting collateral vessels. 3. The incision must be so drawn as not to divide the main arterial trunks supplying that portion of the scalp (which can be easily done so as not to interfere with the first twenty-four hours' drainage of the wound, even if the flap be turned downwards; since, as the patient lies in the supine position, the discharge can always escape from the posterior border). The periosteum should be reflected by a crucial incision from an area corresponding to the first trephine hole, and subsequently as more bone is cut away. In removing the bone "one of the safest and most rapid plans is to make a couple of trephine holes at the opposite extremities of the area to be removed, then to cut half the sides of such an area with a Hey's saw, and finally to complete the division with a powerful bone-forceps. Assuming that the dura mater has been, by means of the trephine-holes, separated as far as possible from the under surface of the bone to be removed, I should have premised that, as no doubt will usually be the case where exploration has to be made, the opening of the skull will have been commenced by the removal of a large disc with the trephine." He prefers a trephine of two inches in diameter. When it is possible to preserve the dura mater

intact the removed portions of bone should be kept in aseptic sponges, and placed between the skin and dura mater at the end of the operation, they having been previously divided into small fragments in the manner indicated by McEwen. "The dura mater should be incised round four-fifths of the circumference of the area exposed at $\frac{1}{8}$ inch distance from the edge of the bone, so as to render it possible to stitch the edges together afterwards. The dura mater is best opened first by incision with the scalpel, and then by blunt-pointed curved scissors, great care being taken not to wound the meninges beneath. The main branches of the middle meningeal artery are best secured by a ligature passed through the dura mater just outside its cut edge, and knotted before the vessel is divided.

We now come to the treatment of the brain. The first practical point to notice after division of the dura, says Mr. Horsley, is whether the brain immediately bulges into the trephine hole or not. "I am inclined to believe that the fact of the brain bulging very prominently into the wound indicates pathological intra-cranial tension—a piece of evidence which, if true, is obviously of the highest importance, since, other things being equal, it will indicate the existence of a tumor. I have never, in my experiments on healthy animals, observed such immediate bulging, and, conversely, it has never been absent in the three cases of tumor. Should no abnormality be found in the membranes, the color of the brain should be carefully noted. Of course, in order to judge as to the color one should have experience, and this may be gained by experiments on the lower animals." "The existence of a slight yellowish tinge, or, possibly, the opposite condition, namely, lividity, will indicate the existence of a tumor beneath the cortex in the corona radiata. The condition of the vessels and the perivascular lymphatics must next be investigated, and particular notice taken of any yellowish white patches in the walls of the latter, indicating old mischief. An accurate knowledge of the arterial and venous supply of the brain is highly necessary, since, not only for this purpose, but also for the more difficult one of removing portions of the brain, is it of great service to see at once what portions of the brain are actually, or likely to be, deprived of their blood-supply. Alterations in the density of the brain must next be observed; but it must be remembered that cerebral tumors situated beneath the

cortex are scarcely to be detected, save by exploratory incision." Now comes the consideration of the removal of a tumor or a portion of brain substance.

Probably the greatest dread of interfering surgically with the brain is the fear of hæmorrhage, which, says Mr. Horsley, is as unreasonable as the taking of aseptic precautions is indispensable. As in the kidney, the arterioles of the brain are directed perpendicularly to surface; and we know that a slight incision of the kidney is followed by free hæmorrhage, which often causes no little alarm, but which ceases if the wound be plugged for a few minutes with a piece of sponge. "We ought to treat the brain in the same way, and thus, while being conservative as far as possible, we should obtain in addition a cleanly cut surface most favorable to rapid union." It will be remembered that much of this hæmorrhage may be avoided by the use of morphine. It seems scarcely necessary to say that every main vessel should be left intact, in view of the terminal character of the cerebral vessels. Owing to the fact that the vessels run in the pia mater they can be raised from the brain, and especially from the sulci, while a portion of the subjacent brain is removed, and without serious damage to the vessel-wall. In incising the cortex the cut must be made exactly vertical to the surface, and directed into the corona radiata, when necessary, in such a manner as to avoid damage to fibres coming from the portions of the cortex, and surrounding the seat of the operation; which is easily done by remembering the paths taken from the cortex to the internal capsule. With a knowledge of cerebral localization it will be possible to operate without destroying all portions of any particular centre, unless total paralysis of a part be preferable to leaving diseased tissue which would keep up the symptoms for which the operation is made. After the removal of a portion of the brain the floor of the wound bulges almost to a level with the surrounding cortex, and there is a tendency to hernia cerebri. Hence the value of the large semilunar flap becomes more apparent, as it more readily unites by first intention, and it is strong enough to resist the upward push of the brain; which is not the case with the cruciform incision.

In regard to closure of the wound, Mr. Horsley says: "I suppose that at the present time I shall be accused of insanity if I propose to lay down the dictum that, as a rule, wound cavities

produced by removal of portions of the brain are not to be drained for more than twenty-four hours ; but it is, nevertheless, my intention to make such a proposition. Let us consider for a moment the conditions of the problem. We wish to obtain union by first intention—that is, firm union in four or five days. We also wish to secure pressure on the brain, which, as just mentioned, is tending to extrude ; and, finally, we wish to arrange matters so that, when the wound is finally healed, the flap of skin may be separated from the brain beneath by a cushion of soft normal (that is, non-inflammatory) connective tissue. All these latter conditions are to be obtained by allowing a certain amount of tension of wound-exudation within the cavity. During the first twenty-four hours there is a steady oozing of blood and serous fluid from the cut surfaces. This is best removed ; and therefore I put in a drainage-tube at the most dependent point of incision (that is, as the patient lies in bed). This tube is to be taken out the next day, and the wound carefully dressed, firm but gentle pressure being made over the centre of the flap. If the wound exudation that subsequently collects in the cavity accumulates to any appreciable extent, on the third day the patient may complain of some pain and throbbing in the wound, which, when exposed, will be found to be distended in the centre, the periphery being firmly united. Now comes a most difficult point in the treatment, namely, the question whether this tendency is to be allowed to proceed, or whether it should be released. By adopting the latter measure the advantages of the pressure will be lost ; so that the point in question is one requiring special attention. The practical feature upon which it is to be decided is the very simple one whether the primary union is in danger of being broken down by the pressure or not. If the former is the case the pressure can easily be diminished by gently opening up the track of the drainage-tube with a probe, and liberating some of the exudation. The value of the tension in reducing the tendency to hernial protrusion is obvious ; but I wish to draw attention to the fact that, until it is finally absorbed, the heightened pressure serves two purposes. In the first place, it compels the lymphatics of the brain meninges to absorb the fluid, just as the peritoneal vessels do after ovariectomy, so admitting of rapid union of the whole skin-wound ; and, in the second place, it acts as a kind of scaffold for the building up of normal connective tissue in the

part. This latter point is very obvious in the lower animals, in which, if we reopen the wound at the end of a few days, the cavity is always found filled with a difficult, spongy, pink connective tissue, the meshes of which contain the above-mentioned wound-exudation. It is this connective tissue which is to form an elastic barrier between the scalp and the brain. As a general rule, it will never be necessary to do more than relieve the tension in the wound once. At the end of a week or five days the wound may be lightly covered with a little powdered boracic acid, cotton-wool and collodion; and the stitches may be removed at any time after the first week. It will always be found that the scalp tends to fall in a little at the seat of operation; but, if the foregoing directions have been faithfully followed out, the hollowing will be slight. It may be considered as a point of practical importance whether a patient will not run considerable risk in pursuing his avocations with a large gap or gaps in the skull. As a matter of fact, this is of little account, as evidenced by experience."

In case a second operation be necessary, it will be found that the cicatricial tissues referred to above will be more vascular than the normal tissues, and the dura mater will be slightly adherent to the surface of the brain close to the cut margin on the dura mater. Old cicatrices in the substance of the cortex, above all those which have healed by suppuration, filling up cavities caused by loss of substance, frequently displace large vessels and give passage to large veins.

Mr. Horsley reported three cases of operation on the brain for epilepsy, in which the patients recovered. In one case a tumor was removed, and as the brain substance all around it appeared dusky and rather livid, he removed all the part apparently diseased. Microscopic examination showed that the tumor was of tuberculous origin. Since Mr. Horsley's paper was read he has operated on another case of tumor of the brain. The patient was a man who had been absolutely hemiplegic for a month, and had passed into a semi-comatose condition; and before the development of these symptoms he had suffered from fits and a terrible pain in the head. Mr. Horsley trephined over the motor region of the right hemisphere, and removed a tumor weighing four ounces and a half. On the day after the operation the patient was perfectly rational and free from pain. On the fourth day the wound was entirely healed. The successful outcome of these four operations gives all the more value to his admirable paper.—*Journal of the American Medical Association.*

MULTIPLE SYNOVITIS IN TYPHOID FEVER.

By J. S. BAILEY, M.D.

In the fall of 1885 (a very dry season) I attended a family, including a man, wife, two daughters and two sons, the youngest eighteen years old, for typhoid fever.

Out of the six patients but one died—Patrick, the father, aged sixty-seven years. In four of the patients the disease ran a typical, but comparatively mild, course. In the boy above-mentioned, who is a cripple of two years' standing, with an anchylosed knee from rheumatic synovitis, a considerable intestinal hemorrhage occurred on the twentieth day, but soon afterward the tongue became moist and clean, the motions were perfectly formed, the appetite returned. In these cases the antipyretic value of quinine was preëminent.

The main object of the present paper is to call attention to the case of Ben, twenty years of age, in which there was a unique and rare complication in the seventh week of *multiple joint pains*, which have been likened to rheumatism, but until there is a clearer insight into their nature we cannot accept their similarity. From the beginning to its termination the case was of extreme severity. His sickness began fourth in order. He was frightened, and battled manfully to keep on his feet. He prescribed for himself large doses of whiskey, quinine, calomel, purges and Crab Orchard salts, but to no avail.

During the first week he had a bronchial catarrh, with a pleuritic stitch of such severity as to require morphia hypodermically. There was nose-bleed every day. Delirium came on early. The temperature exhibited regular morning and evening variations, each evening being about two or three degrees higher than that of the morning. The second and third week the temperature was at its maximum, and during the middle of the latter period stupor was most marked. While the remissions were somewhat more manifest, there was exhibited a most unusual and (to me) unequal disproportion between the pulse and the temperature. The pulse became abnormally slow from having been very fast, running down as low as 40, and it did not rise above 60 for seven or eight days, when again it assumed a rather quicker action, but not to be compared

with that in the first days of his illness. The thermometer in the axilla during this slowness indicated, morning, 102° Fahrenheit; evening, 103° or 104° Fahrenheit. This abnormality was alarming, but, considering it due to an organic change in the muscular structure of the heart from the continued-fever poison, I increased the dose of infusion of digitalis, gave alcohol unsparingly, and added to the R tinc. nucis vomicæ. These remedies, while not increasing the rate, added materially to the tone and volume of the pulse.

A miserable bedsore over the sacrum now began to give annoyance. The slough which came from it was as large as a saucer. The fourth week found the mind out of time, incoherence and subsultus very marked, with loss of hearing on the right side, due to suppuration of the middle ear. He was hanging in the balance. In the sixth week he began to improve; all signs were hopeful. Subsidence of diarrhœa and tympanites; tongue became moist and intelligence fully returned; the temperature had almost returned to the normal; some desire for food; he was taking cognizance of people and things. On the forty-seventh day I was hurriedly called to see him in the early morning; was told he had had a hard chill during the night; the temperature was 104° Fahrenheit, though he had sweat profusely. The stomach was much disturbed; the pulse so feeble and the prostration so great as to create fears of his being quickly taken off. He was suffering agonizing pains, the legs were drawn up, the knees bent at an acute angle, and I suppose that either peritonitis or perforation had taken place. The fever was intense; breathing quickened; there was jactation. I remained all day and at night. By next morning he was apparently better. When the time for the toilet of the bedsore came, it was seen that he could not be moved, his knees were quasi-ankylosed. A more critical examination showed that both knees, both ankles and both tarso-metatarsal articulations were inflamed and intolerant of the least pressure. He had pain in his left breast, a teasing cough, the sputa streaked with a little blood; his breath was offensive and the tongue highly coated. Later in the day the left hip became very sore, and by nightfall both elbows and wrists were involved. The swelling was marked by considerable cutaneous redness and puffiness, the œdema beneath the surface making it look as though an abscess was lurking. This was a novel complication—a clinical feature I had not seen mentioned in any monograph or text-book on typhoid fever.

The position of the patient was characteristic of acute articular inflammation. He winced and whimpered at a slight touch, but there was marked pain on deep and continued pressure. After reflection, in vain searching through the books, I diagnosed the complication as a *multiple synovitis*, involving simply the synovial and periarticular tissues; that it was pyæmic in its nature; that the intestinal ulcerations gave rise to absorption into the blood of the *materies morbi*, and that, while it bore a strong resemblance to, in reality it was not, rheumatism. The inflammation speedily subsided, but the articulations for many weeks were quite tender. The treatment was essentially constructive—generous wines, pure mountain brandy, freshly drawn milk, substantial soups, the enforcement of absolute rest, and last, but not least, quinine.

The “malignant influence,” about which Stokes, of Dublin, has talked so much, played in this instance almost too preponderating a role for art to overcome; but the subject is to-day an example of a patient cured by “preventing him from dying.”

The literature upon this subject is meagre. While synovitis during typhoid fever is a sufficiently rare affection, it is true that two forms of it occur in connection with the disease—the uni- and the multi-articular. The non-articular disease is local, and is regarded by Barwell as a specific part of this fever, and many cases from various sources are reported. The multi-articular is a rarer event, though several well-authenticated cases are mentioned in current medical literature; it is constitutional, occasions more suffering, and its termination is not always a happy one.—*The College and Clinical Record*, September. 1886.

GELSEMINE.—Like strychnine, gelsemine is not destroyed by concentrated H_2SO_4 . In cases of poisoning with the extract or tincture, it is well to remember that these preparations contain gelseminic acid, and, therefore, after the addition of an alkali, they become fluorescent.—*Medical Chronicle*.

THE BLUE DISCOLORATION OF THE VAGINAL ENTRANCE AS A DIAGNOSTIC SIGN OF PREGNANCY.

Before the American Gynecological Society Dr. Thomas R. Chadwick, of Boston, said that he had made it a point in all cases of early pregnancy to make a note of how much discoloration he could detect ; he had tables of four hundred and forty cases examined. He had divided the discolorations into four groups : First, doubtful, where it was so faint that he could not be certain of its presence. Second, suggestive, where it was more marked. Third, characteristic, where the discoloration, though faint, is confined to the anterior wall of the vagina and more particularly to the urethra, just below the meatus and on either side of the meatus. In every instance where this was present the woman was pregnant, with one exception ; and, Fourth, marked, where the congestion has become deep and exhibits the appearance constantly seen during pregnancy.

He did not claim that the characteristic discoloration is seen in every case, but if carefully looked for, it would be found quite pronounced in the majority of cases. The color varies from a violet to a dark, dusky, almost black color. He claimed that this sign was of especial value in cases of retroversion where the size of the uterus could not be determined, and in extra-uterine pregnancy. He had obtained much assistance from it in a few cases of pregnancy accompanied by fibroid tumors, and also where there was a large accumulation of abdominal fat. When present, this sign is of decided value in the early months of pregnancy, but its absence should not be accepted as a positive proof against pregnancy. Cases were cited in which the discoloration had been observed in the seventh or eighth week of pregnancy.

DISCUSSION.

Dr. H. P. C. Wilson, of Baltimore : "I consider this one of the most valuable means of diagnosing pregnancy in the early stages. It is invaluable in cases where women wish to deceive you."

Dr. A. J. C. Skene, of Brooklyn : "This seemed to me to be a most reliable sign in the early months of pregnancy. I believe that

it is an illustration of the physiological hyperæmia of the formative stage of development."

Dr. Joseph Taber Johnson, of Washington: "Some years ago I referred to this point, and the discussion which followed seemed to indicate that the discoloration was a congestion produced by interference with the return of the venous circulation by the pressure of the enlarged uterus. It was held that the same discoloration could be produced by any other tumor which would have the same effect as the pregnant uterus."

Dr. William H. Parrish, of Philadelphia: "In regard to the continuance of the discoloration after labor, I have noted that in primiparæ, where involution of the vagina takes place completely, the discoloration disappears with corresponding rapidity. Where there is sub-involution, the blueness may continue for a longer time. In multiparous women, where the blueness was marked, I have associated it with a condition of sub-involution of the vagina."

Dr. James R. Chadwick, of Boston: "I have failed to notice any persistence in the discoloration described. The general discoloration may persist, but this characteristic blueness, will, I think, be found to disappear. I have looked for this sign in forty or fifty cases of fibroid tumor, and have not found it in a single instance."—*Medical and Surgical Reporter*.



THE ALTERNATIVES TO CRANIOTOMY.

Dr. Robert Barnes sums up his argument in the discussion of this subject before the British Medical Association (*British Medical Journal*, October 2) as follows:

1. The legitimate aspiration and tendency of science is to eliminate craniotomy on the living and viable child from obstetric practice.

2. The advance of hygienic rule, the improvements in the forceps, in turning, in the induction of labor, and in obstetrics generally, have materially curtailed the field within which craniotomy can be justifiable.

3. In the most extreme degrees of pelvic distortion, where de-

livery *per vias naturales* can only be effected with doubtful success to the mother, Porro's operation is the legitimate alternative for craniotomy, it being understood that the opportunity of inducing abortion has gone by.

4. In less advanced degrees of pelvic contraction, but still incompatible with the delivery of a living child *per vias naturales*, the opportunity of inducing abortion having gone by, but in which craniotomy would effect delivery with strong presumption of safety to the mother, the Cæsarian section may be a proper alternative for craniotomy. This is the most debateable point.

5. In the minor degrees of contraction, say from three inches to three and a half or three and three quarters inches, the opportunity of inducing labor having gone by, the far greater safety to the mother obtained by craniotomy, and the prospect of living children in future pregnancies by inducing labor, make craniotomy the proper course to adopt.

6. In other emergencies than deformity, as in obstructed labor from ovarian tumors, the alternative to craniotomy is to remove the tumor.

7. In cases of immovable tumors, Porro's operation is the proper alternative.

8. In rupture of the uterus, the child being delivered or not, Porro's operation is the proper alternative. There the interests of mother and child coincide.

9. In cases of disease or tumors of the uterus obstructing delivery, Porro's operation is the proper alternative.

10. In atresia of the cervix or vagina, Cæsarian section or craniotomy may be necessary; but incisions and gradual dilatation will more frequently be the proper alternatives.

11. When obstruction is due to hydrocephalus or dropsy in the child, embryotomy or tapping is indicated. When the child is dead, embryotomy is indicated, and decollation when the child is impacted, and turning is hazardous.

12. In convulsions and hæmorrhages, the proper alternatives for craniotomy are found in the more scientific methods of conducting labor under these complications.

Lastly, but the dream of Tyler Smith, the abolition of craniotomy, will be fully realized only when hygiene shall have triumphed over disease and deformity.

THE TREATMENT OF A FORM OF DIARRHŒA IN CHILDREN.

There is a form of diarrhœa in children, usually occurring after weaning, and from that period to four or five years of age, which is characterized by the most horrible offensiveness of the motions. This is so marked that it is generally at once mentioned by the parents. It is commonly met with in summer, but is not strictly what is known as infantile diarrhœa, in which disease the stools are sour, but not necessarily fetid. Probably this form of diarrhœa differs from the diarrhœa of younger infants in being caused by the growth of the ordinary bacteria of putrefaction. It is not amenable to treatment by any astringent, nor has any alteration of diet much effect upon it.

Dr. James Braithwaite (*British Medical Journal*, July 17, 1886), however, thinks that it may be successfully treated by disinfecting the bowel contents by means of salicylate of iron, as in the following prescription, which is suitable for a child two years of age: Sulphate of iron, $\mathfrak{D}\text{i}$; salicylate of sodium, $\mathfrak{D}\text{i}$; glycerin, 3 iij ; water to three ounces. The iron and the salicylate should be dissolved separately, and the solutions mixed. The color is darker than port wine, and the taste not unpleasant. One teaspoonful must be given every hour, until the stools would become well blackened, which happens in about twenty-four hours; or a larger dose may be administered at longer intervals. The medicine should then be given every three or four hours, and occasionally a small dose of castor-oil, to clear the bowels well out, and to get the secondary constipating effect of the oil.

In hospital practice, and amongst the poor, it is not so successful as it would be if it were possible to remove the child from the family living-room, the air of which is usually very impure, and is made worse by the smells incidental to cooking, and the presence of a sink.—*Therapeutic Gazette*.


COCAINE IN ANGINA PECTORIS.—Lashkevitch recommends cocaine in doses of one-third of a grain three or four times a day for the relief of angina pectoris. In addition, inhalations of oxygen during the attack are advised.—*Medical Record*.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

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THOMAS F. WOOD, M. D., Wilmington, N. C., }
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SCARLET FEVER AND THE PUBLIC SCHOOLS.

In the absence of a law in North Carolina making the reporting of infectious diseases compulsory upon the physician having them in charge, a word of warning may not be amiss, in view of the probable continuance of scarlatina in many towns in our State as the result of its transportation from a convalescent child to its fellows in the schools. The vexed question of the period of safety in the convalescence of this disease, both for the patient and those who are unprotected by a previous attack, has been so often discussed that it is hardly new to any of our readers to be told that every

case must be judged by itself. But it is an admitted fact that the disease is communicable by fomites, and the doctor and nurse must bear the odium of occasionally being the means of transporting the poison. But it is with especial reference to the introduction of the disease through the public schools that we wish again to call attention, and to urge that a rigid quarantine be always enforced against infected children, and that care be exercised that the child be not only isolated at home from the other members of the family, but also that a close observation be established to see that every possible source of danger shall be cleared away before the child is allowed to mingle again with its schoolmates. Along with the precautions is another almost as important, to see that all the children in the family in which a case of scarlatina occurs shall be kept at home until sufficient time has elapsed to convince the intelligent physician that the danger of further infection is passed. It is needless to call attention to all discharges from the ear or from purulent collections arising as sequels of the disease as fertile causes of a renewal of the disease in exposed persons.

The county boards of health will do the public a service to advise the people of the necessities in the management of this disease, whenever it shall make its appearance in a community. We fear this has been neglected too often of late, because most probably the type of the disease has been generally mild in character, a delusive safeguard that should be avoided. For while the features of the malady rarely change during the prevalence of any epidemic, its reappearance after a period of comparative freedom, may be marked by a most distressing malignancy.

To the specific dangers of scarlet fever is added the increased liability which its invasion brings to an attack of diphtheria, as a complication, and a further reason why so much caution should be exercised in the isolation of the infected for a sufficient period to insure complete recovery. There is one other caution to add to this, that all clothing that cannot be disinfected, either by chemical agents or the greater purifier, heat, shall be destroyed, and that the parents or guardians of the sick shall be charged that the patient shall not be allowed to wear any garment out of the sick room that has not been made safe by the means which the physician shall prescribe. We do not mean to sit in judgment upon any violation of these well-known laws of sanitation, but to recall to our readers these well-attested truths, which, from their very triteness, are often allowed to pass without proper enforcement, the physician vainly supposing that the friends of the sick have known of these laws and a repetition in detail seeming unnecessary.

REVIEWS AND BOOK NOTICES.

RHEUMATISM; Its Nature ; Its Pathology and Its Successful Treatment. By T. J. Maclagan, M.D. Wm. Wood & Co., New York.

In 1876 Dr. Maclagan introduced to the profession a new treatment of rheumatism by salicin, and in his paper presenting his new remedy he advocated his view of the origin of rheumatism as one similar to that of malarial disease. This present work is a more complete exposition of his views.

Of the varieties of rheumatism the author sets out the acute, subacute and chronic. He excludes from his varieties acute gout, acute rheumatoid arthritis, pyæmia with joint inflammation and gonorrhœal rheumatism.

Of the chronic form he says its true nature is only a milder form of the subacute, and that the acute and subacute run into this type ; but it may also be the precursor, as well as the sequence of the other two varieties. The duration of the disease under the treatment of salicin or salicyl compounds, he claims is now reduced to hours, where it formerly lasted days, and to days, where it formerly occupied months in its course. Its seat is chiefly in the motor apparatus and in the fibrous and serous structures of this portion of the body. But all these tissues do not suffer alike, and its ravages are mainly confined to fibrous structures, which are engaged in locomotion, and but seldom seen in the periosteum or dura mater, both structures of fibrous tissue. So the serous membranes of the brain, lungs and abdominal organs, though far exceeding the extent of that investing the heart, are yet much less often affected, and rarely so seriously, as the latter. Dividing all fibrous tissues by function into three classes, namely, those that support entire organs, those that bind together and give support to the constituent parts, and those that regulate movements, the first instanced in the coverings of the liver, uterus, etc., the second in ordinary connective tissue, and the third in the texture of the joints, it is the latter form that relegates chiefly the ravages of the rheumatic poison. For he says that the susceptibility of a given portion of this tissue to the rheumatic poison is in direct relation to the amount of strain which is apt to be thrown upon it, for the

joints which suffer most are those which do the most work, and the only internal organ habitually affected with rheumatism is the one whose fibrous tissues are continually under strain; and that the serous membranes of the larger joints and pericardium being the ones engaged in facilitating active and vigorous movements, are likewise the ones chiefly affected by the disease under discussion. Of the nature of rheumatism, he holds to its heredity, its liability to occur between fifteen and fifty years of age. His argument all leads to the conclusion that it is constitutional trouble of a definite and specific character; that its heredity means a transmitted predisposition to the disease; that its attacks occur at a particular age following the law which seems to govern in other constitutional diseases; that the repeated attacks in one individual, the affection of joints in rapid succession simultaneously, all point to it as a specific and constitutional affection. To his own satisfaction the author demolishes the lactic acid theory of the origin of rheumatism, and with equal vigor he sets up his theory of a malarial origin. This leads our author into a long discussion of malaria and its manifestations, and brings him happily, to himself, into his selected explanation of rheumatism as the offspring of a miasm. This is a new ground of battle, and contestants will find Dr. MacLagan a sturdy opponent to all who enter the lists against him. His general discussion of rheumatism is divided into consideration of affections of the loco-motor apparatus and the vasculo-motor apparatus by the rheumatic poison. These studies cover five chapters. His treatment follows the same divisions, and he reviews the action and results of the various drugs that have been given for the cure of rheumatism, and brings himself gently and surely down to his own potent remedy. He claims the most consideration for salicin, which has a dual value, tonic and anti-rheumatic. But whether the practitioner shall give salicin or salicylic acid, it must be given promptly and boldly. Twenty to forty grains should be the dose every hour until there is the first mark of its action in the subsidence of pain, and it will require an ounce, more or less, to accomplish the removal of the acute symptoms, and then slowly diminishing doses will be needed to secure the benefit derived from the first portion given.

In considering the treatment of rheumatic affections of the heart, the vasculo-motor system, he follows the same urgent line of dosing,

and claims for his remedies preventive, as well as curative, powers. In the mode of action of salicin and salicyl compounds in the therapy of rheumatism, he draws a parallel with the action of quinine in malarial fevers (a natural suggestion from his theory of malarial origin of rheumatism), but he denies to the cinchona alkaloïds any great virtue in the cure of the former disease. He also denies the conversion in the system of salicin into salicylic acid, but claims that its change ends in saligenin, saliretin and salicylous acid.

The last three chapters of the book are devoted to the study of cerebral rheumatism, the relation of rheumatism and chorea and rheumatic hyperpyrexia. The book is essentially original, bold and bright, and while it contains many opinions and statements that are open to question, it is well worth the consideration of the profession.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By AUSTIN FLINT, M.D., LL.D. Sixth Edition. Assisted by WM. H. WELCH, M.D., and AUSTIN FLINT, M.D. Lea Brothers & Co., Philadelphia.

There has not arisen among the teachers of medicine of this age one whose words have been so carefully and trustfully studied as those of the late Dr. Austin Flint. Beginning his professional life with a determination to become a master of the details of his work, his close observation and studious habits, aided by accurate record of whatever met his eye, fixed his place among his fellows and students as a man worthy of their highest trust in the safeness of the counsels which he gave. Conservatism, guided by a liberal mind and acute intelligence, has marked his career, and no one can study this edition of his work on general medicine without being inspired with feelings of veneration for the author, and gratitude that his work in life should have been rounded up in this volume.

It was largely rewritten by himself, and he had added to his own valuable labors those of Dr. Welch, of Johns Hopkins University. To the latter we owe all of the first seven chapters, devoted to the study of general pathology, and a great part of the eighth, on etiology. Entirely new articles have been inserted in this edition on Infectious Tumors, Syphilitic Diseases of the Lungs, Cerebral Syphilis, General Considerations Relating to Inflammatory and Structural Diseases of the Spinal Cord, Spastic Cerebral Paralysis of Children, Hereditary

Ataxia, Myœdema, Multiple Neuritis, General Pathology of Fever and Milk Sickness.

Dr. Flint declares his adhesion to the germ theory of disease as the most rational explanation of morbid phenomena. Diagrammatic engravings have been introduced to illustrate the descriptions of cerebral and spinal diseases with reference to topical diagnosis. From the first edition of this work to its completion in the one under notice, the author has steadily kept pace with all the advances in medicine, and it has been his labor, and one well accomplished, to glean from all the fields, besides his own fruitful one, the richness of the harvests, his keen intellect leading him always in selecting the genuine grain and in carefully winnowing out the chaff. To those students of medicine who have so often appealed to his works with assurance of help it is needless to commend this book, and to those who are now to take it up for the first time there is great enjoyment in store.

Surely the distinguished man has erected for himself a lasting monument, an abiding place for his memory in these words of wisdom, which will be a source of admiration to his own generation and those to follow him.

THE ECLECTIC MAGAZINE.

It does not do for the doctor to be reading physic always, lest he carry the "smell of the shop" into every parlor and dining-room where he meets his healthy friends. The doctor's storehouse of general knowledge does in many a community more for him than profound learning in his technicalities, as the former is within the comprehension of his patrons, and of the latter they only judge by his general accomplishments. But business reasons aside, we only started out to say that if there be a doctor who is reaching out for good reading and knows not which way to turn in the wilderness of good things, we commend him to the habitual reading of the old *Eclectic Magazine*. It has stimulated the taste of generations for the best of reading, and has satisfied generations with the healthiest of intellectual food.

A LABORATORY GUIDE IN URINALYSIS AND TOXICOLOGY. By R. A. WITTHAUS, A.M., M.D. Wm. Wood & Co., New York.

Dr. Witthaus has given to the laboratory student, and the busy physician as well, a useful and concise manual for the analysis of

urine, with close description of the constituents, normal and abnormal, of urine, which is accompanied in each case by the tests for the discovery of each of these components. This is the portion of the work devoted to the qualitative analysis of urine. The quantitative analysis follows, and the study of the urinary deposits completes the work on urinalysis.

The detection of poisons is studied in three classes: Volatile, Mineral and Organic, with short but clear directions for their apprehension. An extended review is unnecessary in view of the reputation of the author and the character of the work, but it will find appreciative readers whenever it is consulted.

ANALYSIS OF THE URINE, with Special Reference to Diseases of the Genito-Urinary Organs. By K. B. HOFMAN, of the University of Gratz, and R. ULTMANN, of the University of Vienna. Translated by T. Barton Brune, A.M., M.D., and H. Holbrook Curtis, Ph.B., M.D. Second Edition. D. Appleton & Co., New York.

The changes that have been made in urinalysis and the rapid exhaustion of the first edition induced the authors to issue this edition.

After a short introduction, partly historical of the study of the subject of the work, there is a closely written chapter on the Histology of the Urinary Organs, and one on the Secretion of Urine, fully sufficient to set out these facts for the student.

The physical characteristics and chemical composition of urine is then written out in detail, with an accurate account of each. This includes, of course, the normal and abnormal constituents of urine, and there is appended a full description of all the tests recognized and practised in the detection of these matters.

The directions for procuring the necessary apparatus and reagents for the approximate determination of the urine's constituents are of especial value to the beginner in this line of study.

Following the chapter on Quantitative Analysis of Urine is a chapter which is to serve as a key to Approximate Analysis.

A chapter is devoted to General Diagnosis, and then we have a most elaborate study of Albuminuria, which is of great value. The book will be found of assured value, with those who study its contents, among the volumes devoted to the consideration of the important, and often knotty, problems growing out of the investigation of the urine in disease. There are eight colored plates appended to the book illustrating the deposits in the urine.

THE CARE OF THE EYES AND EARS. By RICHARD H. LEWIS, M.D., member of the State Board of Health and Surgeon for Diseases of the Eye, Ear and Throat to St. John's Hospital, etc., etc. North Carolina State Board of Health. 1886.

This paper was written for general distribution, as one of the health tracts that the Board of Health of this State intends to issue for the instruction of "those not at all versed in medicine."

The paper is opened by a short and popular description of the normal eye, which, though short, is not wanting in clearness. After which follows the discussion of weak-sight, far-sight and near-sight. A review of these subjects is not expected in the notice of this most excellent paper, nor of the portion devoted to the care of the ear. But in the remarks on blindness especial attention should be directed to the remarks concerning the loss of sight incident to inflammation occurring in the first few days after birth, and the remedies that are advised for its prevention "till the doctor comes." That is a good hit he makes at the old granny's remedies for this serious condition of the eyes, that is, the use of breast-milk, rotten apple, tea leaves, alum curd, and other of the delusions of the monthly nurse. We should be ashamed to believe that any physician allowed or fostered such practices, and therefore we hardly feel justified in recalling these absurdities in this notice. A like practical disposition is made of the study of the ear in a way to teach the general laity. There is no attempt at technical display, here or elsewhere, and the charm of the tract, which name we shall stick to, is its exceedingly practical character.

It comes within our province, however, to call the attention of those of our readers in this State, who are interested in the well-being of school-children, to the directions which are given for the proper regulation of light in school-rooms and for the arrangement of desks, as well as the air-space necessary to healthy school-rooms. In brief, he advises 200 cubic feet of air and 300 or 350 square inches of glass (as window measurement) for each child. The light is to be admitted chiefly from the sides of the room, which is to be oblong, and best from its northern side. A dead wall should always be in front of the children. A black-board at the back of the teacher's desk, which is to be at one end of the oblong room, facing the two end windows, will partly suffice for this purpose.

The walls should be tinted, but not the ceiling. The desks should

be so proportioned to the height of the seats as not to fetch the pupil's face too near the book. The opposite extreme will hardly need mention. The child's back should find a comfortable rest against the back of his seat, so that he will not be called upon to lean on the desk for relief of fatigue.

This paper, or, as we have called it, a health tract, should be carefully read by every teacher in the State, and the Superintendent of Public Instruction cannot better serve the department of which he is the head, than by asking the Board of Health for such distribution as will reach his teachers. The days of the log-cabin school-house, with the little square window in each side, made of four panes of glass, with no ventilation except the cracks in the floor, in the walls and under the doors, with no regard to the amount of fresh air which each child is to get, and no arrangement for constant change of the air in the room—the days of these houses have passed. In days long past they may have been the quiet nooks from which future presidents caught sight of the gleaming dome of fame's temple, and were inspired to begin in these stuffy, dim and obscure places the great race that was to lead them to the rich goal of their ambition. The education of children is not accomplished in this way now, and Dr. Lewis, by his plainly written words of caution, is lending the hand of his special branch of medicine to lift up the schools all over the State, from the log-cabin stage to that of the modern school-house, that the tenement may be in keeping with all the new ideas that the teachers are seeking every year to attain at the normal schools, and with the improved methods that are parts of their ever-growing education.

If the Board of Health can continue its good work as successfully and present it to the public as intelligently as our author has the share of the work allotted to him, there will be no need of fear that abundant appreciation will not reward their labors.

It will be a service well performed for the county boards of health to see that this pamphlet has proper distribution.

SIM'S SPECULUM IN DELAY OF THE AFTER-COMING HEAD.—Dr. Robert McC. Lord, of Kansas City, writes: "In pelvic presentations, when, after the birth of the body, the head cannot be immediately delivered with safety, and death of the child from asphyxia is imminent, air may be freely admitted to its mouth and nostrils, and pulmonary respiration established, by gentle traction on the posterior vaginal wall with a Sims speculum."—*Medical Record*.

SOCIETY REPORTS.

THE BALTIMORE ACADEMY OF MEDICINE.

STATED MEETING, OCTOBER 19, 1886.

SUDDEN FAILURE OF HEART'S ACTION THE RESULT OF DIMINUTION OF ATMOSPHERIC PRESSURE.

Dr. Frank Donaldson, Jr., referred to a case of sudden failure of the heart's action that he had recently seen. The cardiac depression was apparently the result of the diminution in atmospheric pressure that the patient experienced while in a high altitude.

The same sudden heart failure, he observed, is seen as a result of rarefaction of the air in the Pneumatic Cabinet. The approach of the heart failure is indicated by a gradually weakening and irregular action of the pulse.

He thinks the cardiac failure due to a diminution of pressure *upon* the heart, while at the same time the pressure *within* the heart remains the same.

Dr. S. C. Chew has never had his attention called to just such a case, but thinks Dr. Donaldson's explanation a very probable one. He thinks the irregular and tumultuous action of the heart due to a lessened pressure upon the heart generally, thus allowing of a universal dilatation of the capillaries.

Dr. F. Donaldson, Jr., said that cases of the same nature as the one referred to by him had been seen by other observers—Loomis records 48 of them. Solly has seen a number of these cases in high altitudes, many of whom had never experienced a preëxisting cardiac disturbance previous to their going to these elevations.

SHOCK CONSEQUENT UPON SURGICAL OPERATIONS.

Dr. J. J. Chisolm said, at the last meeting, attention had been called to the small amount of shock consequent upon surgical operations upon young children. In his experience old persons stand them as well.

A CASE OF PLEURISY.

Dr. Henry M. Wilson said he had been in attendance upon a lady for about six weeks or two months. She was very carefully nursed by her sister during this time. One day she called his attention to a slight dyspnœa, and referred to a slight pain in the side, only lasting for a few minutes, that she had felt a few nights previous. Upon examination he found the pleura on that side in a state of inflammation, with its cavity filled with fluid and the heart in consequence displaced. Thought it singular that so extensive an inflammation should have been in progress with so few outward symptoms.

Dr. S. C. Chew said often a less extensive inflammation in this locality gave rise to much more pronounced symptoms than where the process is more extensive. He related a case in his own practice similar in general to that of Dr. Wilson. It was in a man, and his pleural cavity became filled with fluid before he was aware of the existence of any trouble whatever of a serious nature.

PERITONITIS DUE TO PERFORATION OF VERMIFORM APPENDIX.

Dr. Henry M. Wilson referred to a patient, a man, aged 27 years, whom he had seen. He found him complaining of a not very severe pain over the abdomen. The next morning he was sent for hurriedly and found his patient in collapse, from which he aroused him only with the greatest difficulty. The pain continued without being lessened. He diagnosed peritonitis. The man had had during the previous summer moderate pains over the abdomen at different times. Two weeks after having first seen his patient he died.

Autopsy revealed a swelling containing fluid over the left inguinal ring. It was aspirated and about three pints of fetid pus escaped. Within the abdominal cavity there was a massing together, by means of a fibrous exudation of the omentum and intestines in such a way as to form, so to speak, a second diaphragm, dividing the cavity into two distinct parts. The pelvic portion was filled with pus.

The vermiform appendix was perforated, and in the most dependent portion of the pelvis there was found a hard mass of fecal matter about the size of a minie-ball. This mass was without a nucleus, as was shown by section made at a later date. He thinks

perforation took place at the time of the extreme collapse to which he referred. He referred to a peculiar pain in the penis, that lasted for about half a day, as one of the most prominent symptoms.

INTUBATION OF THE LARYNX.

Dr. F. Donaldson, Jr., recently intubated the larynx of a child with membranous croup. There was apparently a temporary benefit, but the child died in about eight hours.

Dr. S. C. Chew, who had seen Dr. Donaldson's patient was yesterday called in consultation to see another child suffering from the same trouble, but in a much more precarious condition. The parents of the child refused to permit any operative procedure. Though he has not seen the patient since he imagines it must be dead. Does not think tracheotomy or intubation of the larynx would have done any good, as the obstruction was less in the larynx than farther down in the trachea.

ASTIGMATISM IN TWINS.

Dr. J. J. Chisolm has recently seen two cases of interest—two men, twins, aged 19 years—each suffering from the same degree of astigmatism and of the same angles.

Two girls, twins, aged 12 years each, likewise suffering from the same degree of irregular astigmatism and the same angles.

THE INFLUENCE OF REMOVAL OF ONE OVARY UPON THE SEX OF SUBSEQUENT CHILDREN.

Dr. S. C. Chew spoke of a young lady from whom one of her ovaries has been removed. As she is about to be married, it will be of interest to note the effect upon the sex of her children.

Dr. B. B. Browne said the theory of removal of an ovary affecting the sex of the subsequent children was, he thought, pretty well abandoned, because of women with but a single ovary having given birth to children of different sexes.

Dr. J. J. Chisolm referred to a case of

POISONING BY COCAINE.

One year ago he operated upon a man for glaucoma. Recently, while on his way up the bay, the man caught cold, and, in conse-

quence, there was a conjunctivitis set up. He applied to the inflamed conjunctiva a 5 per cent. solution of nitrate of silver, after first having anæsthetized the eye with cocaine. In half an hour sight was reduced in that eye to such an extent that he barely had perception to light. The man had, in consequence of the instillation of cocaine, an acute traumatic glaucoma.

Eserene was applied to the affected organ, with the result of counteracting the action of the cocaine, and in less than three hours its action was apparent, and in five hours sight in that eye was completely restored.

He thinks had eserene not been applied a destructive glaucoma would most certainly have set up. This is the first case of the kind he has seen.

Dr. B. B. Browne has used cocaine with good effect in the vomiting of pregnancy. He administers 10 gtt. of a 2 per cent.

Dr. H. P. C. Wilson exhibited

A NOVEL FORM OF CLINICAL THERMOMETER

that he had recently purchased in London. It is encased in a locket, and can be worn upon the watch-chain. It, however, possesses the great disadvantage of not being self-registering.

BALTIMORE, MD., November 2, 1886.

BROMIDE OF ETHYL IN CONJUNCTION WITH CHLOROFORM.

Dr. J. J. Chisolm is now employing the bromide of ethyl in conjunction with chloroform as an anæsthetic. His method is to anæsthetize the patient first with bromide of ethyl, and then, after discontinuing this agent, to keep up the anæsthesia with chloroform. The advantage claimed by him for this method is that he accomplishes the desired result much more quickly than when chloroform is used alone.

Dr. H. P. C. Wilson has been very forcibly impressed with the universal absence of nausea in all patients whom he has seen chloroformed abroad. He has had an opportunity to see a large number of persons anæsthetized in Europe, and has never yet observed nausea in any of them. He has made enquiry, but can get no satisfactory explanation for its absence.

Dr. C. C. Bombaugh asked Dr. Wilson if the frequency of nausea in his cases might not be attributable to impurities in the chloroform. He said oftentimes aldehyde is present in chloroform as an impurity. In his experience in army surgery he had used it freely and had no cases of nausea.

Dr. H. P. C. Wilson replied that he had no reason to suspect the drug used by him, as he never employed any other than Squibb's.

Dr. Samuel Theobald has avoided nausea to a great extent by giving a hypodermic injection of morphia and atropia about thirty minutes before the time for administering the chloroform. The period of recovery after this treatment is quiet and without excitement.

Dr. C. C. Bombaugh asked Dr. Chisolm if he had noticed any decrease in the number of patients nauseated since he has used bromide of ethyl in the early stages of the process of anæsthesia.

Dr. J. J. Chisolm said he had not seen much nausea lately, but could not say that the decrease was due to his plan of operating.

Dr. Christopher Johnston said it was singular how a patient would at one time take an anæsthetic with but little or no discomfort, and at another time the result would be almost fatal. He referred to a child with hare-lip upon whom he had occasion to operate. The fissure was of such a size as to necessitate two operations. The first time he brought the child under the influence of the anæsthetic there was nothing to create alarm, but at the second operation the patient became almost lifeless.

TRACHEOTOMY FOR MEMBRANOUS CROUP.

Dr. Christopher Johnston spoke of an interesting tracheotomy that he had performed. The history is as follows: On the night of October 6th he was called to see a child, of about three years of age, suffering from membranous croup. The patient was then very ill, studulous breathing was present. On the morning of October 7th he did tracheotomy, using a Durham tube. For a time the operation gave much relief. For a period of five to seven days there was no attempt to breathe through the larynx, but all the respiration was carried on through the tube in the trachea. After this time there was a considerable swelling of the tissues of the neck, the membranous formation increased and the formation could be seen in the trachea below the point of insertion of the tube.

The child's strength was supported by the constant administration of brandy. The upper part of the trachea and larynx was completely occluded by false membranes, which were dislodged by passing upward from the opening in the trachea a director to which was attached a piece of string tied to a bit of linen cloth. Intubation was also resorted to. Paralysis of the throat muscles allowed food to pass into the trachea, and it was extended through the tracheal tube. No air passed through the larynx for nine days. The tube was in the child's neck, in all, a little more than three weeks. After the removal of the tube the child grew better, and is now perfectly well. He calls attention to this case as being somewhat an exception to the rule, for it is very rare that a tube can be removed from the trachea at all after it has remained there so long as this one did.

Dr. J. Edwin Michael thinks there are many children whose lives are sacrificed by the neglect of this operation.

Dr. Christopher Johnston thinks one justified in doing this operation for no other purpose than to relieve suffocation. He had also another child suffering from membranous croup or diphtheria, in whom he used a spray of nitrate of silver solution. The tissues were supplied with nutriment by obliging the child to breathe an atmosphere of pure oxygen. It recovered from this attack, but eighteen months later he was called on to do tracheotomy on the same child who had contracted the disease again. The child recovered, but the tube could never be removed. A year afterward the child was suffocated by the accidental occlusion of the tube. Autopsy revealed a cicatricial contraction of the tissues of the larynx. Intubation of the larynx was frequently resorted to with no good result.

Dr. J. J. Chisolm saw a patient upon whom tracheotomy had been performed one year ago for syphilitic contraction of the larynx. The tube has remained in position for twelve months, and cannot be removed.

Dr. J. Edwin Michael saw a patient who had stenosis of the larynx. Dilation had constantly been carried on in order that the man might breathe, but upon one occasion this precaution was neglected and the man began to find breathing becoming more and more difficult until he became quite cyanotic. Dr. H. C. McSherry, who was the physician in attendance, called Dr. Michael in to do

tracheotomy. He tried to do laryngotomy, but found the cricoid cartilage ossified. He then made the opening further down. Relief was immediate. This patient wore the tube for months. Dr. McSherry dilated the larynx from the wound upward until the opening in the larynx was sufficiently large to permit closure of the wound in the trachea. There was some interference with his voice, but the man is now living and in good health.

Dr. Samuel Theobald wished to know if the introduction of these dilators did not give rise to considerable spasm.

Dr. Michael said it did at first, but the muscles soon became tolerant of their presence.

FORWARD DISPLACEMENT OF THE EYE-BALL, DUE TO A TUMOR.

Dr. J. J. Chisolm related a case that was of interest to himself. It was the displacement forward of the eye-ball, due to the presence of a tumor in the socket. The patient wanted the tumor removed if the eye could be returned to its position.

Upon anæsthetizing the patient he found the tumor to be an osteoma of the socket tissues, having its origin in the molar bone. The patient was allowed to come from under the influence of the chloroform and was told of his condition. He concluded not to be operated upon. This is the second of these cases that he has seen in the past year. In his second case the ball was so far pushed out that he removed it because of the disfigurement it gave rise to.

Dr. Christopher Johnston had had a patient with a tumor of the lachrymal gland. It became so large as to push the eye completely into the inner angle of the socket. On removal of the enlarged gland the eye receded to its normal position.

Dr. J. J. Chisolm: Within a week of the patient just referred to by him, saw a patient with the eye bulged out from an enlarged lachrymal gland. He asked Dr. Theobald if he had ever used hydrogen peroxide for clearing the secretions from offensive ears?

Dr. Theobald had not.

Dr. J. J. Chisolm finds it a very nice method. He first washes out the ear with warm water, then pours in the hydrogen peroxide. It causes an oxidation of the secretions, and in a few minutes the ear is perfectly clean.

CURRENT LITERATURE.

CLINICAL NOTES ON THE VALUE OF RESORCIN, CHITHYOL AND LANOLIN IN CUTANEOUS DISEASES.

By HENRY W. STELWAGON, M.D., of Philadelphia, Physician to the
Philadelphia Dispensary for Skin Diseases, Chief of the Skin
Dispensary of the Hospital of the University of
Pennsylvania, etc.

Resorcin- Employed in 25 cases of eczema, 5 cases of trichophytina, 3 cases of tinea versicolor, 6 cases of leg ulcer, 20 cases of seborrhœa and alopecia, 5 cases of psoriasis, 2 cases of sycosis, 1 case of lupus erythematosus, and 1 case of favus—total, 68 cases. In eczema, the remedy at times acts satisfactorily; but in the greater number of cases it aggravates. It seems to act best in eczema rubrum, and when the disease is upon the lower extremities. It should not be prescribed in greater strength than a 10 per cent. ointment—in fact, rarely more than thirty grains to the ounce. If applied in greater proportion, there is but one result, and that is, marked aggravation of the disease. In erythematous eczema also, it occasionally has a good effect. While a few cases of eczema were permanently relieved by this remedy alone, such a result is exceptional. It is more in the power that resorcin appears to have in controlling the itching that its advantage is seen. In this respect it seems with present limited experience to be an addition to the therapeutics of eczema.

Of the five cases of trichophytina, two were ringworm of the bearded region, and the remaining three of the scalp. Of tinea sycosis, both cases were of moderate degree: cure was effected in one case in three weeks; in the other the result was good, but it required a longer period to secure it. In the three cases of ringworm of the scalp, it seems to be on a par with most other remedies usually employed; while under observation (five weeks), they improved slowly. In these five cases of trichophytina, extraction of the hairs, although advised, was not sufficiently carried out. The strength of ointment used was 10 to 20 per cent.

In tinea versicolor, either as a lotion or ointment, resorcin has a curative action, but it is inferior to the common remedies employed.

Used side by side with hyposulphite of sodium, the latter is found to be much more rapid in its effect.

In painful leg ulcer, resorcin in some cases acts admirably. In five of the six cases recorded, pain was almost instantly allayed; and in one, a complete cure resulted. In four cases improvement was noted, but healing only progressed to a certain point. In the sixth case marked aggravation followed. It was employed in strength varying from 8 to 12½ per cent., the ointment kept constantly applied, renewing usually twice daily. In seborrhœa, and also in alopecia dependent upon this disease, good results may be, in some cases, obtained by employing an application similar to that recommended by Ihle, consisting of a drachm of resorcin, one to two drachms of castor oil, four or five minims of Peruvian balsam, and four ounces of alcohol. This should be employed every night, being well rubbed in, and the scalp shampooed every four or five days. While the result with this plan of treatment is not always positive, its action in a fair proportion of cases entitles it to favorable comment. In psoriasis, as also in sycosis, the drug seems practically valueless. In the single case of lupus erythematosus in which it was tried, there was no improvement. In one case of simple superficial epithelioma occurring on the nose it was used as a strong ointment, 40 per cent., and so far (two months after healing) the result has been good. In a second case in the same locality, and in a third case occurring about the ear, it was without effect. In a single case of favus of the scalp, in a boy of 15, resorcin was used faithfully for two months, apparently with little, if any, effect; the ointment used consisted of two drachms of resorcin and six drachms of lanolin.

Ichthyol—Employed in 8 cases of acne rosacea, 10 cases of acne vulgaris, 12 cases of eczema, 4 cases of furunculus, 3 cases of psoriasis, and 1 case each of lupus erythematosus and favus—total, 39. The cases of acne rosacea were of the ordinary type, redness being due more to simple stasis than to permanent enlargement or dilatation of the vessels. The strength of ointment used varied from 5 to 30 per cent. The stronger ointments proved too irritating in the majority of cases, and it was found that the strength generally suitable was 10 per cent. In one of the cases the result was good, marked improvement following within a few weeks after beginning treatment; in two cases the result was fair; in one other the improvement was slight; in the remaining four no change for the better occurred, and, in fact, in two

of these the disease was aggravated. In acne vulgaris the degree of usefulness was about the same as in acne rosacea: two cases were practically relieved, three somewhat improved; in three cases no change; and in the remaining two cases the disease was made worse. The strength of ointment varied from 5 to 50 per cent; the strongest applied to lesions only. In the average case, where the application was made to the whole face, a 10 per cent. ointment was employed.

In eczema, ichthyol, as was to be expected, was found applicable only to the squamous form. In vesicular and erythematous eczema, as well as the other acute and subacute varieties, it is irritating. Even in squamous eczema it has no positive beneficial effect. It was employed in this form in the strength of one or two drachms to the ounce. In furunculus, ichthyol in the form of a stiff ointment applied as a plaster proved valuable in two of the four cases, the beginning furuncles aborting, and those that had partly and fully matured becoming less painful, and healing satisfactorily. The strength of plaster used was 20 per cent. In the third case the application appeared to be beneficial. In the fourth case of this disease the effect was negative. In the three cases of psoriasis in which this remedy was used, in 30 per cent. ointment, the lesions were practically uninfluenced.

In the case of lupus erythematosus ichthyol was prescribed in ointment form, 10 and 20 per cent. strength, with slight improvement, but there was no positive effect. In the single instance of favus of the scalp the same case in which resorcin was tried, ichthyol was used as a 25 per cent. ointment for a period of three months, and at the end of that time it was difficult to say that the disease had been perceptibly improved.

Lanolin.—This ointment base, consisting of about seven parts cholesterin fat and three parts water, now well known, will probably win for itself general recognition. As with all new and costly remedies, it is not always easy to procure a thoroughly reliable preparation. Although lanolin (as introduced by Liebreich) should contain about 30 per cent. of water, a sample accidentally came under my notice lately with which it was impossible to incorporate the slightest additional amount of water, showing that complete saturation had been practised, or, in short, the sample apparently was made up of equal parts of cholesterin fat and water. In one instance, also, the specimen consisted of pure cholesterin fat, although labelled lanolin, there being an entire absence of water.

Cholesterin fat alone should, for obvious reasons, be the ointment basis (rather than the mixture with water), from which to prescribe; water or any other substance being added in the proportion circumstances might demand. This fat, as manufactured at present from, sheep's wool, has the strong sheep odor, disagreeable in the extreme but this, strange to say, is to a great extent lost when mixed with water, so that in lanolin the sheep's odor is not at first so noticeable, but when applied to the surface the heat of the body soon dissipates the water, and the disagreeable odor is developed. This odor is the main disadvantage of lanolin as an ointment base. Another disadvantage is its consistence, which may be obviated, however, by the addition of 20 to 30 per cent. of an ordinary fat. Within the past month Liebreich, in a note in the *British Medical Journal*, calls attention to an improved lanolin—lanolinum purissimum—in which the cholesterin ethers are entirely absent, and the consistence such that no addition of other fat is necessary.

It is now, I think, by various authorities proven beyond doubt that lanolin is more rapidly taken up by the skin than any other fat. This property is susceptible of clinical proof, and in this, therapeutically, is its great advantage. In acute inflammations, where merely a protective influence is the object, the property is undesirable, and in such cases, if ointments are used, cold cream, vaseline, or a mixture of vaseline and lard, is preferred. On the other hand, in cases of chronic eczema, psoriasis, and similar diseases, where there is thickening or infiltration, and a degree of penetration is desired, then lanolin is superior to the ordinary fats. In a few cases of an acute and subacute type the application of lanolin proved, for some reason, irritating.

In sycosis and the parasitic diseases lanolin was also used as the ointment base, and although, theoretically, it should be vastly superior, my experience so far has failed to prove any marked advantage in these cases over simple lard.—*Journal of Cutaneous and Venereal Diseases*.

COMPULSORY SWIMMING is suggested as a part of "education, both public and private." "Good exercise." "Excellent cold tonic," gives purity and improves nutrition. "Diminishes mortality from drowning." Many other advantages.—*Journal of Reconstructives*.

THE DIETETICS OF PULMONARY PHTHISIS.

By ALFRED L. LOOMIS, M.D.

Some of the most important rules which govern the dietetics of phthisis may be formulated as follows:

1. Every phthisical patient should take food not less than six times in the twenty-four hours. The three full meals may be at intervals of six hours with light lunches between.

2. No more food should be taken at any one time than can be digested easily and fully in the time allowed.

3. Food should never be taken when the patient is suffering from bodily fatigue, mental worry or nervous excitement. For this reason mid-day naps should be taken before, not after, eating. Twenty to thirty minutes' rest in the recumbent posture, even if sleep is not obtained, will often prove of more value as an adjuvant to digestion than pharmaceutical preparations.

4. So far as possible each meal should consist of such articles as require about the same time for digestion, or, better still, of a single article.

5. Within reasonable limits the articles of any one meal should be such as are digested in either the stomach or intestine alone, i. e., the fats, starches and sugars should not be mixed with the albuminoids, and the meals should alternate in this respect.

6. In the earlier stages the amount of fluid taken with the meals should be small, and later the use of some solid food is to be continued as long as possible.

7. When the pressure of food in the stomach excites cough, or when paroxysms of coughing have induced vomiting, the ingestion of food must be delayed until the cough ceases, or an appropriate sedative may be employed. In those extreme cases where every attempt at eating excites nausea, vomiting and spasmodic cough, excellent results are attained by artificial feeding through the soft rubber stomach tube.

8. So long as the strength will permit assimilation and excretion must be stimulated by systematic exercise, and when this is no longer possible the nutritive processes may be materially assisted by passive exercise at regular intervals.

The following may serve as a sample menu for a day in the

earlier stage. The meat soup is made by digesting finely-chopped beef (1 lb.) in water (Oj.) and hydrochloric acid (5 ℥.) and straining through cheese cloth.

MENU.

On waking.—One-half pint equal parts hot milk and vichy, taken at intervals through half an hour.

8 a. m.—Oat meal, with abundance of cream, little sugar; rare steak or loin chops, with fat, cream potatoes; soft boiled eggs, cream toast; small cup of coffee, two glasses of milk.

9 a. m.—Half ounce cod-liver oil, or one ounce peptonized cod-liver oil and milk.

10 a. m.—Half pint raw meat soup; thin slice stale bread.

11-12.—Sleep.

12:30 p. m.—Some white fish; very fine rice; broiled or stewed chicken; cauliflower; stale bread and plenty of butter; baked apples and cream; milk, Kumyss or Matzoon, two glasses.

2 p. m.—Half ounce cod-liver oil, or one ounce peptonized cod-liver oil and milk.

4 p. m.—Bottle Kumyss or Matzoon; raw scraped beef sandwich.

5:30-6 p. m.—Rest or sleep.

6 p. m.—Some thick meat or fish soup; rare roast beef or mutton; spinach; slice stale bread; custard pudding; ice-cream.

8 p. m.—Half ounce cod-liver oil, or one ounce peptonized cod-liver oil and milk.

9-30 p. m.—Pint iced milk; cup meat soup.

1-2 a. m.—Glass milk, if awake.—*Journal of Reconstructives.*

THE MILK TREATMENT.

By T. A. McBRIDE, M.D., of New York.

The patient is to use *skimmed* milk alone; no other kind of nourishment.

This must be taken slowly, and in small quantities, so that saliva

may be well mixed with it. The reaction of the milk to test paper must be neutral or alkaline.

The first week is the most difficult to get over, unless the patient has a strong will.

During the second week two ordinary quarts may be consumed during the day. The milk must be drunk four times daily ; at 8 a. m., at noon, at 4 and 8 p. m. The hours may be changed, but regular intervals must be maintained.

If the patient comply with these directions he will complain neither of hunger nor thirst, although the first doses appear so very small.

The daily quantity may be increased to eighty or more ounces.

If, after having attained this quantity or more, and the patient gets worse, diminish the amount to the quantity used the first week, and increase more slowly.

Constipation at the beginning is a good sign. This may be remedied by warm water injections, or by the use of castor oil, rhubarb, addition of sugar of milk to the milk, or by taking some bicarbonate of soda at bed-time. If the constipation be obstinate, a little coffee may be added to the morning dose of milk, or towards 4 p. m., stewed prunes or a roasted apple.

If, on the other hand, diarrhœa results, and rumbling of the bowels is frequent, the milk is too rich or is being taken in too large doses.

Feverishness is no contra-indication to its use. If the patient is very thirsty, he may drink Clysmic, Bethesda, Poland or Vichy Water. If he have a strong desire for solid food at the end of the second or third week, he may have a little stale white bread or toasted bread with salt in the morning and again at 4 p. m. Once a day he may have some soup made of milk and oatmeal.

After continuing this treatment for five or six weeks, it may be modified, by allowing the milk only thrice daily, and once a day steak or a chop. Raw meat digests most easily, and should be used in preference to the cooked when possible.

It may be necessary to add a little salt to the milk in some cases, and in others to have the milk drunk when very hot. If the patient become flatulent, buttermilk is often beneficial in small quantities.—*Journal of Reconstructives.*

THE TREATMENT OF CHOREA BY CIMICIFUGA.

Dr. Hiram Corson, a veteran Pennsylvania physician, has again called attention in the *Medical and Surgical Reporter*, to the remedial virtues of cimicifuga in chorea. He affirms that he has used cimicifuga racemosa in every case which has come to him in more than fifty years, "and always successfully in a brief time." He recommends the fluid extract of the dried root in teaspoonful doses after each meal and a fourth dose at bedtime. Several cases reported by Dr. Corson were all speedily alleviated by the cimicifuga, and in one or two instances the duration of the disease would seem to have been materially abridged.

Dr. Corson is persuaded that none of the other remedies in general use for chorea (not accepting arsenic) have half the value of the black snake-root. Its effect is, he thinks, that of a "quieter of the general nervous system," and he has found it in half teaspoonful doses of the fluid extract a charming remedy for insomnia.

Ringer and Phillips regard cimicifuga as an excellent tonic of the nervous system, and especially suitable for cases characterized by failure of coördination.—*Boston Medical and Surgical Journal*.

TOOTHACHE from decayed teeth is said by Swiss authority to be relieved promptly by cotton-wool moistened with a mixture of equal parts of camphor and chloral and a fifth as much cocaine.—*American Druggist*.

MUSCULAR RHEUMATISM DUE TO THE USE OF TOBACCO.—I have met with a great many cases of muscular rheumatism due to the use of tobacco in some form, mostly in the shape of snuff placed under the tongue. All remedies are unavailing whilst the use of the weed was indulged in. Every practitioner, I think, on meeting with a case of the above disorder, should inquire as to the tobacco habit and correct it, if possible.—*Edward Anderson, M.D., in the Maryland Medical Journal*.

NOTES.

THE reviewer of Dr. Maclagan's work on rheumatism, in the *Therapeutic Gazette* of November, adds to the author's list of salicyl compounds the salicylate of ammonium, which, he says, theoretically meets the objections urged against the others, and is less likely to nauseate. It can be extemporaneously prepared by adding in solution fifty grains of carbonate of ammonium to sixty of salicylic acid. The result is a solution sweet in taste and syrupy in consistence.

WE clip the following from the *Salisbury Watchman*, to show how admirably nature can care for her fosterling away from the surgeons and without antiseptics: "A woodcock was killed near here this week which is a curiosity. The bird was discovered to have a reed about five inches long sticking through its body. The flesh and skin had healed around it and made it fast. It protruded nearly two inches from the breast and back of the bird, which was in good condition."

DR. JOHN R. QUINAN, of Baltimore, in a private letter to the editors, says of Dr. Satchwell's paper on malarious diseases, which appeared in the November number of the *JOURNAL*: "I endorse all his views to the letter, because my experience in regard to malaria in Southern Maryland for twenty-five years tallies with his, and I like the advice he gives to Southern men to study disease as they find it at home, and not trust so much to foreign teaching and imported theories. We are amply able to think and act for ourselves."

WASTED WIT.—We have received an anti-vaccination cartoon of the London Anti-vaccination Society, portraying a scene in which the vaccinator is a grim skeleton, inserting with grim satisfaction the potent virus. The mother holds her infant in her arms, while she looks with dismay, in appeal to the law in the person of a London policeman, who holds a placard with a sickly pun upon it in his hand: "Vaccination Act for the Jenner-ation of Disease." When the Canada folks secure an artist and give us the scene enacted on one of their trains, in which a fleeing, hypocritical anti-vaccination harangher from Montreal was discovered with an old vaccine scar and one freshly done, we would like to give place to both on our office wall.

THE Archives of Gynæcology, Obstetrics and Pædiatrics, New York, series of 1886, just completed, has met with such warm encouragement, the publishers have decided to issue monthly, and commencing January, the parts will so appear, instead of bi-monthly, as heretofore.

DR. MCKINNON, of Alabama, has found (*New York Medical Record*) that sulphate of quinine continuously given will reduce venereal desire, and in old age often destroy it entirely. He thinks that in gonorrhœal chordee, where there may be malarial complication, it is more useful in overcoming this distressing affection than camphor lupulin or the bromides. (There is a large quantity of the cinchona alkaloid given and taken hereabouts, but we fail to see the effect that Dr. McKinnon attributes to it as an anaphrodisiac. Nor has there been any decline in the price of baby-carriages because of an excess of them over the demand.)

THE LENGTH OF A STEP.—Dr. Gilles de la Tourette has recently published a monograph upon normal locomotion and the variations in the gait caused by diseases of the nervous system. He found, from a comparison of a large number of cases, that the average length of a pace is, for men, 25 inches, for women 20 inches. The step with the right foot is somewhat longer than that with the left. The feet are separated laterally in walking about $4\frac{1}{2}$ inches in men, and about 5 inches in women. The ataxic gait is characterized by an actual shortening of the pace coinciding with an apparent lengthening, and by a considerable increase in the lateral separation of the feet.—*Medical News*.

WE are gratified to know that the profession of North Carolina was so ably represented at the meeting of the Virginia Medical Society in Fredericksburg last month. Dr. W. T. Cheatham, of Henderson, was the delegate who wore the honors of the occasion. His speech at the banquet, in reply to the toast to the distinguished visitors, was most happily conceived, and entirely consistent with the Doctor's reputation as a physician of eminent attainments. We are always glad to know that the *entente cordiale* between the profession of the two States is in the keeping of such men as Dr. Cheatham, and we feel that he has done his part to discharge the obligation laid on us by the visit of Drs. Maguire and Edwards to the annual meeting of the North Carolina Medical Society in New Bern.

DR. J. SOLIS COHEN has noticed a peculiar perversion of the temperature sense of the tongue and oral cavity, caused by strong solutions of cocaine. While still capable of appreciating heat, the patient cannot recognize cold, and iced water seems of blood heat, or even warmer.—*Boston Medical and Surgical Journal*.

VENEREAL INFECTION PRONOUNCED A CRIME.—Some consternation may be caused among a certain class by a recent judgment of Justice Wills, of the Central Criminal Court, England. The charge against the prisoner was on two counts, one with having had carnal knowledge of an imbecile woman, aged eighteen, and another, under 24 and 25 Vict., c. 100, s. 47, for a "fraudulent assault" upon the same woman, occasioning her actual bodily harm. The harm done was the wilful infection with syphilis. The prisoner was found guilty on both heads, and sentenced to two years' imprisonment for the first, and five years for the second. The more remarkable piece of information is that a man who has immoral sexual connection with a woman, knowing himself to be suffering at the time from gonorrhœa or syphilis, is liable to prosecution and penal servitude.—*Medical Record*.

READING NOTICES.

W. H. WOLFORD, M.D., 2,634 State St., Chicago, Ill. :—I have used Peacock's Bromides in a number of cases with the best results, especially in epilepsy, one case in particular, C. S., a railroad man, having been compelled to quit work on account of the paroxysms coming on every day. After one week's treatment with Peacock's Bromides, the attacks were considerably lessened, now, after two months' treatment, he seems entirely cured and has resumed work. Any case where there is a nerve sedative indicated I can cheerfully recommend Peacock's Bromides.

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INGLUVIN.—Ingluvin is a refined substance prepared from the ventriculus callosus gallinaceus, the gizzard of the domestic fowl, (gans domesticus). It is the essential principle of the gizzard, and bears the same relation to poultry that pepsin does to the higher animals. The diseases in which the use of ingluvin is indicated are indigestion in its various forms, known as dyspepsia, and for sick stomach or nausea caused by debility of that organ. It was originally discovered to be a remedy, indeed a specific, for vomiting in pregnancy; in this respect it stands above all other medicinal

agents. In all that is here set forth the manufacturers claim no more than is sustained by medicinal authority of the highest standard. Ingluvin is a powder of a yellowish-gray color, and may be prescribed in the same manner, dose and combinations as pepsin, 3 to 10 grains. The pulverulent form is considered more desirable, and it can be administered either dry or in water, milk or tea. In sickness and gestation the dose may be increased to 10 or 20 grains. Dr. Roberts Bartholow, who probably stands to-day as the greatest authority on materia medica in this country, speaking of ingluvin, says: "Ingluvin has the remarkable property of arresting certain kinds of vomiting—notably the *vomiting of pregnancy*. It is a stomachic tonic, and relieves *indigestion*, *flatulence* and *dyspepsia*. The author's experience is confirmatory of the statements which have been put forth regarding the exceptional power of this agent to arrest the vomiting of pregnancy. It can be administered in inflammatory conditions of the mucous membrane, as it has no irritant effect. Under ordinary circumstances, and when the object of its administration is to promote the digestive function, it should be administered after meals. When the object is to arrest the vomiting of pregnancy, it should be given before meals."

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LACTATED FOOD IN DIABETES MELLITUS.—The following case will well illustrate the usefulness of the Food when applied to the treatment of this disease in its most aggravated form. A man 22 years of age had been suffering from headache, prostration, intense thirst and a voracious appetite for several months. Upon examination of him, in March last, he had all the above symptoms; had become too feeble to walk, and was practically confined to the bed. He was voiding 12 quarts of urine in 24 hours, which, upon analysis, showed a specific gravity of 1036—4 grains of sugar to the ounce. His thirst was intolerable, his appetite unnatural, craving starchy and saccharine food; was unable to sleep and obstinate constipation existed for several weeks. He was put upon Lactated Food and skimmed milk, allowed to drink all he wanted of these, but denied water or any other article of food. In 48 hours the quantity of water voided was reduced to 3 quarts. In one week his food and drink consisted wholly of Lactated Food and the general improvement in his symptoms was most marked. He continued on this diet for two months, and, so far as I could determine, all the prominent symptoms of Diabetes had disappeared. He was voiding but 1 quart of urine in 24 hours, sp. gr. 1016, bowels regular, could sleep without anodynes, had gained in strength and was walking about. At this time, six months after adopting this plan of treatment, he is at work, has no apparent symptoms of the disease, and is allowed to take a mixed diet, simply avoiding starches and sugars.







